A

NEW INQUIRY

INTO THE

CAUSES, SYMPTOMS, AND CURE,

OF

PUTRID AND INFLAMMATORY

FEVERS;

WITH AN

APPENDIX

ON THE

HECTIC FEVER,

AND ON THE

ULCERATED AND MALIGNANT

SORE THROAT.

Naturâ monſtrante viam.

BY WILLIAM FORDYCE,

M.D. BY ROYAL MANDATE.

THE THIRD EDITION.

LONDON:

Printed for T. CADELL, in the Strand; J. MURRAY, in Fleet-Street; and W. DAVENHILL, in Cornhill.

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THE FOLLOWING INQUIRY

IS INSCRIBED

BY

HIS BROTHER, AND FRIEND,

WILLIAM FORDYCE.

This Day is publiſhed,

(Price Two Shillings and Six-pence, ſewed)

The THIRD EDITION,

With ADDITIONS and an APPENDIX,

OF

A REVIEW of the VENEREAL DISEASE,

And its REMEDIES.

By W. FORDYCE, M. D.

PRINTED FOR T. CADELL IN THE STRAND.

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INTRO-

INTRODUCTION.

MEN, who live in a ſtate of nature, commonly enjoy uninterrupted health for ſixty or ſeventy years. That, of the inhabitants of London and Weſtminſter, ſo few, in proportion to their numbers, arrive at ſuch an age, is matter of juſt concern. It ſeems the more ſurpriſing, as the ſituation of thoſe cities appears, for the moſt part, naturally favourable to health; as the climate is upon the whole temperate, the proviſions wholeſome, and the quality of the water and other drinks in general excellent; nor have they, for more than a century paſt, been viſited by famine, peſtilence, or the ſword.

It is apparent from the bills of mortality, that, next to the great waſte among children

dren in their infant ſtate, Fevers of the Putrid and Inflammatory ſort, or a Mixture of both, contribute moſt largely to this dreadful havock.

They aſſume a variety of forms; invading ſecretly and ſlowly at one time, unexpectedly and violently at another; now going off gradually, then deſtroying quickly. No diſeaſe is ſo common to all ages, and both ſexes; none ſeizes the healthy ſo often; none is owing to ſo many different and contrary cauſes; none expoſes ſo frequently to the moſt fatal events; none affects all parts of the body more grievouſly, or overſets the intellectual powers ſo completely; and what deſerves particular notice, the ſame remedies are, according to the ſtate of the ſick and the periods of the diſeaſe, ſalutary at one time, which at another prove deadly.† Such too is the difference between one ſort of fever and another, that treating them as if

† See Wiggan's Preface to Dr. Friend's Works.

if they were the ſame, coſts the patient his life. For example, in the Malignant Sore-throat, or in a Petechial Fever, bleeding carried to a certain extent kills; when in an Inflammatory Sore-throat, or Pleuritic or Phrenitic fever, it cures. In like manner, while in a Putrid caſe a well-choſen purging medicine, by diſcharging the bile or fomes morbi downwards, ſuſpends the diſeaſe, till there is time obtained for its cure; the ſame medicine, exhibited in a true Peripneumony, checks the expectoration, or perhaps deſtroys. It is evident then, that ſome latent cauſes, not ſufficiently explored, operate in producing ſuch a fatality, and that this is likely to continue till they are ſo thoroughly underſtood as to enable us to attack them with ſucceſs, upon the ground of common ſenſe and ſound philoſophy.

Having for many years obſerved with regret the deſtructive effects of theſe diſeaſes in this metropolis, I have been led

to

to conſider their Cauſes, Symptoms, and Treatment, with an attention which produced the following Inquiry, on which I entered chiefly for my own information and ſatisfaction. I have ſince been inclined to believe, that making it public might be of uſe to the young and unexperienced among the ſtudents of medicine, thoſe eſpecially who intend to practiſe in London, and thoſe who are preparing to take the charge of the ſick in our Fleets and Armies. At the ſame time I am not without a hope that its utility may extend yet further, having endeavoured to addreſs it to the underſtanding of mankind at large.

The difficulty of the ſubject will, I doubt not, ſecure the candour of my readers, as its importance cannot fail to engage their attention.

Warwick-Street, Weſtminſter,
Jan. 27, 1773.

PRE-

PREFACE

TO THE

SECOND EDITION.

THE writers of the Monthly Review for January laſt have remarked, that, "after an "attentive peruſal of the following Work, they "are at a loſs to determine on what account it is "called a New Inquiry, as they find it to con- "tain more of the parade of ſcience than any new "matter of information with reſpect to the Na- "ture or the Cure of Fevers."

Were this really the caſe, the Author muſt have acted very weakly, to ſay no worſe, in oſtentatiouſly attempting to obtrude upon the Public a performance that could only derogate from his own character, while it contributed nothing to the benefit of mankind. But, that it is not the caſe, he muſt continue to think, till thoſe Gentlemen have proved their charge, *by producing from other authors ſuch paſſages as ſhall be found equivalent to what he conceives to be New matter of Information, with reſpect either to the Nature or the cure of Fevers.* And this he takes the liberty to range under the following heads.

I. Of the appearances of the Blood in the Inflammatory Fever he has given ſuch a deſcription, as will

will at once, in moſt caſes, aſcertain the nature of the fever, the quantity of inflammation, and the ſtrength of the patient; and furniſh, on the whole, the ſureſt rule for determining to what extent the bleedings are to be repeated for its cure.

II. Of the appearances of the Tongue in the Putrid Fever he has offered ſuch an account, as may enable the phyſician to judge with more accuracy, than by any other ſymptom, concerning the quantity of putrefaction, the progreſs of the diſeaſe, and its entire removal (we will not ſay its criſis) as well as concerning the courſe neceſſary for its cure by antiſeptic medicines and diet, and the extent to which both muſt be carried; points which had not been ſufficiently explained before in this country.

III. He has ſhewn, that all the varieties of the Putrid Fever, by whatever name they are called, excepting a very few of the malignant kind, or the plague itſelf, do probably partake of the ſame common nature, and may be inſtantly corrected into a much ſafer ſtate, and afterwards gradually expelled from the habit, by a proceſs more or leſs antiſeptic, and more or leſs evacuating, but in general of greater efficacy than any that had been publicly taught, or generally practiſed.

IV. He has evinced, that the ſymptom of Putrid Fevers which is always moſt alarming, and often fatal,

fatal, namely, Watchfulneſs, or yet Delirium, may be frequently obviated by a very ſimple proceſs here deſcribed, and hitherto not even ſuggeſted for that purpoſe.

V. He has preſcribed a PREVENTIVE POWDER, which will, in numberleſs inſtances, prevent the Putrid Fever when juſt impending; and ſpecified the marks to know when it ſhould be given.

VI. He has recommended a better regimen, in the Hectic Fever, than is practiſed in London, except by a very few phyſicians; and has added a preſcription for a medicine, in the Hectic of Infants, when marked by a ſwelled belly, that will be found effectual to a degree never known in England.

VII. He has pointed out a more accurate and efficacious regimen for the Putrid Sore-throat than has been offered to the public by thoſe who have given the beſt deſcription of that diſeaſe.

He may venture to ſubjoin, that by putting together, in a ſcientific manner, the lights left us on the ſubject of Fevers by the ancient phyſicians, and the moſt reſpectable of the moderns, he has endeavoured to convince young and ingenuous inquirers after medical knowledge, more ſtrongly than has been yet done, of the difference between the enlightened experience of ages, and thoſe unſupported opinions which the ſtudents of phyſic are daily imbibing at our ſeveral ſchools in the different parts of this iſland; where, to adopt the language

guage of a maſterly writer, "They are taught to "lead Nature captive, and to make her act con- "formable to their preconceived notions, however "crude and chimerical, impoſing laws on the "animal œconomy which have no reality, and "eſtabliſhing, with great praiſe and induſtry, "ſources of action which exiſt no where but in "their own imaginations."

Thus has the Author of this little Work made his diſpaſſionate Appeal to the Public, whoſe impartial judgment will finally decide between him and the Monthly Reviewers. If, after a particular and candid examination of the only evidence that can weigh on the preſent queſtion, viz. *what has been ſaid by other writers on the above articles*, it ſhall appear that the allegation brought againſt him is well founded, it will then remain for him to plead, as he can with the greateſt truth, that he is no plagiary, having acknowledged all that he remembers to have borrowed; that, ſo far as his reading has extended, thoſe articles ſeemed to him to contain New matter of Information in the ſenſe in which he has ſtated them; and that in writing theſe ſheets he was not ſtudious of the parade of ſcience, but ſincerely ambitious of adding his mite to the advancement and utility of a profeſſion ſo nearly connected with the moſt important intereſts of humanity.

Auguſt 6, 1774.

CHAP-

CHAPTER I.

CHAPTER I.

SECTION I.

HISTORY OF FEVERS.

IF there were any records of Fevers, or of their treatment, before the days of Hippocrates, they have not been tranſmitted to us. Though Babylon, the capital of Aſſyria, was renowned as the moſt ancient ſeat of wiſdom, it was yet without phyſicians. The ſame hiſtorian, * who mentions this fact, informs us, that Ægypt had phyſicians for every diſeaſe, but ſays nothing of their writings; and it is probable that nothing of importance in this way was produced before the Hippocratic æra.

It was obſerved by Pœtus, a correſpondent of Artaxerxes, that Hippocrates poſſeſſed, unlike all former phyſicians, a knowledge of the moſt extenſive kind, comprehending at one view all the branches of phyſic. Before he was thirty-four years of age, he wrote his Epidemics; when it is probable he only watched the progreſs of diſeaſes, or

* Herodotus.

or at leaſt but ſeldom practiſed venæſection for their cure; ſince we find ſo many of his caſes ending in hæmorrhages, &c. Nor is it leſs probable, that, depending on diet chiefly, he then uſed but few medicines: he would elſe have mentioned what they were; for in his firſt and third Epidemics we find him noting accurately the minuteſt circumſtances, the ſucceſſion of the ſymptoms, and Nature's manner of relieving herſelf in the diſeaſes going off at ſtated periods by hæmorrhages, diarrhœas, thick water, critical ſweats, abſceſſes, &c. There we likewiſe find obſervations on the air, ſeaſons, winds, ſituation, waters, diet, age, and ſex, recorded with a hiſtorical preciſion hitherto unequalled. And in his fourth Epidemic he deſcribes a conſtitution of the air producing diſeaſes attended with ſuch ſymptoms as nonpluſſed this accurate obſerver himſelf, and obliged him to have recourſe to his Θειον τι.

Of thoſe diſeaſes ſome were diſtinguiſhed by eruptions of the Σηψ kind, from which we learn that they were of a putrid ſort: and hence the origin of the terms Septic and Antiſeptic, ſo much more talked of than underſtood at preſent. Perhaps this great man had an eye to the ſymptoms of that peſtilence which happened at Athens, while he was at Thrace, in the ſecond year of the Peloponneſian war, anno mundi 3574, 425 before Chriſt, and about the thirtieth year of Hippocrates; and of which it is particularly related

lated by the hiſtorian Thucydides,* "that during "its progreſs ſuch a ſtate of deſpondency ſeized "the ſick, as to put an end to all attempts for "their recovery."

Another proof this, that medicine had before that period not received lights of any conſequence; ſince ſo learned and inquiſitive a people as the Athenians would probably have been otherwiſe poſſeſſed of them, and in the courſe of ſuch a calamity applied them. In favour of the Hippocratic method of ſtudying diſeaſes, it may be juſtly conſidered as no ſlight preſumption, that we find thoſe Athenians a few years after rewarding, with ſingular honours, that illuſtrious perſon, for preventing, as they believed, the return of the plague, or obviating the evils to be apprehended from a malignant ſtate of the air.

Among the particulars which ſtrike us in his books of Epidemics, it is not the leaſt remarkable, that heat was the conſtant attendant of a fever; and hence, probably, the technical term, Πυρ ἐλαβε.

In the firſt and third Epidemics we meet with the names of Pleuriſy, Peripneumony, Phrenitis, &c. which were ſeverally applied as the ſide, lungs, or brain, became the ſeat of the diſeaſe. Again, we ſee a number of patients recovering by hæmorrhages, expectoration, fluxes, thick water, abſceſſes, which were ſo many exertions of Nature

* Lib. ii.

for her own relief. From ſuch obſervations, aided by long experience, he probably compoſed his other works; and from them again his Prognoſtics, Aphoriſms, and other divine pieces.

We are alſo informed of fevers, whoſe whole duration being only one acceſſion, gave them the name of Continual Fevers. They did not affect any particular part, and laſted longer or ſhorter according to their genus. Among the moſt ſimple of theſe was the Ephemera, or Diary Fever, which ran its courſe in twenty-four hours; and hence it took its name.

When the fever was protracted by any cauſe, ſo as not to run its courſe in that time, and was not attended with any appearances of malignity in the urine, ſweat, or excrement; it was reckoned very manageable, and called ſimply Synochus, or Continued Fever, and went off in three or four days. It is deſcribed in the Prognoſtics of Hippocrates.

When the continued fever was ſometimes ſtronger, and did ſometimes abate, but never entirely diſappeared, it was termed a Continual Remittent, to diſtinguiſh it from the ſpecies laſt mentioned.

But when the juices of the body differed much from their natural ſtate, the fever was deemed of a bad ſort, in proportion to their degree of degeneracy, and was called Continual Putrid.

The

The next kind of fevers were Intermittents, which went through their courſe by repeated acceſſions, with a freedom from fever in the intervals, and returned at ſtated periods. Of theſe they obſerved various ſorts, which, according to their time of return, were denominated Quotidians, Tertians, Quartans, or a combination of them. When the intermittent fever doubled, it often put on the appearance of a continual one, was ſcarcely to be diſtinguiſhed from it but by a maſter in the profeſſion, and was chiefly known by the ſtated hours of its return, by its coming at the ſeaſons of intermittents, and by finally ranking itſelf in that claſs. Such Hippocrates has ſpecified, in his Coacæ Prænotiones, as ending in quartans: and ſuch have been ſince marked by Dr. Sydenham, as appearing early in the autumn, and being really intermittents; though alſo, as he confeſſes, frequently taken for continual ones.

Fevers were early called Epidemic, as invading a whole people who inhabited the ſame country, lived on the ſame diet, and drank of the ſame water: they were called Endemic, when peculiar to one place; and they took the name of Sporadic, when they only attacked particular conſtitutions.

Again, Acute fevers were divided into different ſorts, according to the part affected. Thus an inflammation, if affecting the brain, was ſtiled Phrenitis; if affecting the intercoſtal muſcles and the pleura, Pleuritis; or, if ſeizing the lungs

themſelves, Peripneumonia: and of each kind the progreſs and iſſue were marked with peculiar preciſion.

But as ſome fevers were attended with ſymptoms, of which the old phyſicians could not trace the cauſe, and where they could not judge of the part affected; as thoſe fevers continued beyond the uſual periods, or were not accompanied with the uſual appearances, within their uſual periods, of ſweats, looſeneſſes, thick water, nor with any criſis in the water; calling ſuch ακριτοι: ſo there was nothing left but to refer them to the θειου τι, and characterize them by their idea of the worſt ſymptoms, or by a name which marked their peculiar type, as Typhodes, Hemitritea, and others in that ſtile.

But in proceſs of time, that is, in the days of Alexander Trallian, who lived ſoon after Julian the emperor, and who, like the induſtrious bee, travelled every where to collect every poſſible information, concerning medicines or diet, that could be of uſe to the ſick, phyſicians began to reaſon with intelligence on the cauſes of fevers; and from thence to diſtinguiſh them into the general names of Putrid and Inflammatory. "Men," he obſerves, (lib. xii. c. 2.) "are divided in their "opinions about the cauſes of fevers; ſome aſ-"ſerting that they are all produced by bile; "others, by phlegm: nor are there wanting thoſe "who deny, that any ever ariſe from the putre-"faction of ſuch matter in the veins, though it

"is

" is there inflamed; but affirm, that the putrid " materials exiſt only in the belly; remarking, in " proof of their aſſertion, that a vomit, or a gly- " ſter, has often carried off a fever;" which he regards as a circumſtance of much weight on their ſide of the queſtion. In the ſame book we find theſe two remarkable paſſages.

" Though the ancients were ſhy of purging in " fevers, I have purged in an acute one; but it is " a practice that requires great knowledge, " attention, and boldneſs.

" When you diſcover that fevers ariſe from the " blood, take away blood in the beginning; but " in fevers from bile, purge rather: to the ex- " cretion of which bile if there ſeems to be any " tendency, you may conclude the fever will not " be violent." See his 12th book.

Finally, the Greek writers diſtinguiſhed fevers into Acute and Slow. By the firſt they meant thoſe which more directly endanger life, ending in a certain number of days; and which are acute in a greater or leſs degree, as they kill in one day, which happens very rarely; in three days; or in ſeven, fourteen, twenty-one, or more. By Slow fevers they underſtood ſuch as exceeded a certain period; and them again they divided into thoſe which might be fatal, as Hectic, Cachectic; and thoſe that might be ſafe, as Quartans.

Thus it appears, that while the ancient writers paid a very earneſt attention to all the appearances

of

of diſeaſes, and claſſed them out to a great number, they were not ſufficiently acquainted with the nature or cauſes of them.

Some of the phyſicians of the latter centuries, enlightened by philoſophy or chymiſtry, and maſters of the healing art, as laid down by the Greek phyſicians, have done much towards the improvement of medical knowledge; I mean particularly Ballonius, Duretus, Heurnius, Forreſtus, Lommius, Riverius, Sydenham; and in this century, F. Hoffman, Boerhaave, and his ſchool (Haller, De Haen, and Van Swieten) Tiſſot, Huxham, and others: but to their ideas and experience too little attention is paid in this country, where ſome of our firſt phyſicians are devoted to the ſpecious ſyſtems of Sauvages, and his abettors, by whoſe technical terms, and numberleſs Greek etymologies, they have divided and ſubdivided them in ſuch a manner, as not only to perplex the minds of many ingenious enquirers, but actully to frighten them from the ſtudy of the profeſſion. For this reaſon, among many others, I wiſh to propoſe a ſhorter and ſimpler view of the matter; and preſume to lay down the following maxims.

That all fevers may be comprehended under three claſſes, Putrid, Inflammatory, or a mixture of both:

That each may at firſt ſight be ſuſpected, or almoſt certainly known, by the ſymptoms peculiar to each:

That

That in the putrid, an antiſeptic courſe may be immediately adopted with a degree of ſecurity ſcarcely known hitherto, and hardly to be credited, as it renders their iſſue happy, not much leſs certainly than that of inflammatory fevers, which are already known to be generally ſafe, if the antiphlogiſtic method, which conſiſts of bleeding, together with a proper diluting and attenuating regimen, be begun in time, and purſued to its juſt extent.

In fevers of the mixed ſort the cure conſiſts of bleeding in the beginning, together with proper correctives of the humours, and afterwards purging them off.

Let us now enquire into the Eſſential Character, the Cauſes and Symptoms of Putrid and Inflammatory Fevers; and alſo into the Treatment adapted to each, referring the mixed ſort to ſome other opportunity: for, if the cauſes are not explored, and the ſymptoms which diſtinguiſh the Putrid from the Inflammatory are not marked, the cure of the one applied to the other will be fatal; as, on the contrary, if both are treated according to their nature on their true principles, a few plain rules will place the Putrid nearly as much within the reach of art as the Inflammatory.

SECT.

SECTION II.

ESSENTIAL CHARACTER OF FEVERS.

IT has been long a queſtion, What conſtitutes the eſſence of a fever: ΠΥΡ ΕΛΑΒΕ is the ſtile of Hippocrates, as if he believed Heat to be its proper character. Galen and his followers, both Greeks and Arabians, thought that an unnatural heat, ſpread over the whole body, or over many parts of it, at leaſt over its nobleſt parts, was the peculiar characteriſtic of this diſeaſe: that though the outward parts were not remarkably hot, either to the phyſician's touch, or to the feeling of the patient, they were always ſenſible of an inward burning. Though this is true of the worſt ſort of fevers, yet perſons afflicted with agues feel great cold in the beginning of the fit, both outwardly and inwardly, ſo that there may be a fever without any unnatural heat; conſequently the eſſence of a fever is not heat. The Arabian phyſicians ſuppoſed the Interruptions of the Functions of Life to be the eſſential character of the diſeaſe under conſideration: but this likewiſe can only be applied to ſome ſpecies of fevers, and not to fevers in general. The phyſicians of the preſent century have, after many diſputes, reduced the general idea of fevers to this ſimple mark, Quickneſs of Pulſe: for, ſay they, it is the only ſymptom that holds univerſally true, as the other

other phenomena do not, like it, exiſt at the different ſtages of a fever, or only conſtitute the ſpecies, and not the general eſſence of fevers. But to this it may be objected, that in many ſtates of the putrid fever the pulſe is under ſixty, which is certainly below the ſtandard of a healthy pulſe in either ſex. It is to be regretted by the way, that this circumſtance ſhould be ſo often conſidered as a bad ſymptom, ſince we have ſo frequently found it the ſureſt mark of a tendency to recovery, and a moſt favourable circumſtance, where, being rightly underſtood, it is not changed by ſtimulating drugs, called Cordial Medicines, bliſters, and other ſuppoſed cardiacs.

There are ſome conſtitutions where, though a cold and hot fit have preceded, the fever does not raiſe the pulſe to the feveriſh ſtandard. I have under my care at this time a young gentleman ill of a fever, with a very foul tongue, very ſizy blood, and pain in the hepatic region upon motion or deep breathing; it is the eleventh day of the fever: the blood drawn away the fourth time, on the ninth was very ſizy; but the pulſe never has been up at ſeventy-two: he recovered on the fourteenth.

It may likewiſe be objected, that exerciſe, the heat of the air or bed-chamber, the age and ſex, as well as the emotions of the mind, affect the pulſe: but all theſe are properly applied to the ſpecies, and not to the genus of fevers. The alteration of the pulſe,

pulſe, with a painful and unuſual laſſitude of the whole body, and a ſudden weakneſs in arbitrary motion, is pronounced by Bianchi, the Pathognomonic ſign of a fever.*

For my own part, I believe with F. Hoffman, that any ſuch Impediment to the freer Circulation of the Blood, as deſtroys its æquilibrium, is the eſſential character of a fever.

SECTION III.

GENERAL CAUSES OF FEVERS.

IN the earlier periods of phyſical enquiries we diſcover among phyſicians the greateſt marks of attention to whatever could be ſuppoſed to have a ſhare in producing fevers. They looked for their cauſes in the Air and its different temperaments of heat and cold, in the Seaſons, Climate, Situation, and every circumſtance or accident that could at all affect the quality of the fever. This they did with a ſagacity and acumen that would have done honour to the moſt enlightened of modern times, in which the principles and properties of bodies, together with the action of the different elements, are certainly better underſtood; but in which, I am ſorry to ſay, they are not regarded as they deſerve, either by the ſick, or by their phyſicians.

The

* Hiſtoria Hepatis, p. 547.

The Quantity or Quality of the Blood, of the Bile, of Foods, of Drinks, of Obſtructed Perſpiration, and too Thin Cloathing, will likewiſe be found material cauſes of fevers.

AIR.

Air is the chief inſtrument of health and principle of life, without which no animal can ſubſiſt. Nature accordingly makes uſe of all poſſible ways to preſerve it in a wholeſome ſtate; for it is thinned and purified by heat, ſtirred and kept in continual motion by the winds, by which too the airs of different countries are combined and mixed together.

Lightening and thunder purge the corrupted, and conſume the redundant and noxious particles. Plagues have been preceded by great calms. In hot countries thunder-ſtorms benefit the air extremely.

Although the air is by ſuch means often preſerved in a wholeſome ſtate, yet particular countries, ſituations, and ſeaſons, often alter its qualities ſo as to render it more or leſs unfavourable to our bodies; its dryneſs producing one ſet of diſeaſes, its moiſture another, its heat or its cold another, and ſo of the reſt.

No animal can exiſt long in the ſame individual quantity of air. A linnet is made ſick in three hours with living in half a gallon of air.

Dr.

Dr. Hales could not live half a minute without uneaſineſs in ſeventy-four cubical inches of air, and not one minute in the ſame quantity without danger of ſuffocation.

As a gallon of air is ſpoiled by the ſteams of a man's breath in one minute, conſequently a hogſhead of air would not ſupply a human creature an hour; nor indeed can he live in it one third of that time. From which inſtances it appears, that air is quickly ſpoiled by the fumes of the lungs: but as the lungs are the chief inſtrument of ſanguification, churning and mixing the blood and chyle by their reciprocal expanſion and dilatation, they cannot perform their office without a continual freſh ſupply of air: weak lungs therefore leave the ſanguification imperfect.

Burning matches of brimſtone ſuddenly deſtroy the ſpring of the air; and the ſteams of animals and candles render it unfit for reſpiration.

If animal bodies are in a decaying ſtate, and the air be filled with their ſteams, they ſometimes produce peſtilential fevers: the ſteams of ſome decayed vegetables have the ſame effect. The effluvia of human bodies are likewiſe very hurtful to the air. Three thouſand men living within the compaſs of an acre of ground would make an atmoſphere of their own ſteams, ſeventy-one feet high, which would ſoon become peſtilential, without the winds to diſpel it. The air of priſons for this reaſon produces mortal fevers.

Of

Of ladies, and tender people, who paſs a great part of their time in cloſe rooms where the air is tainted with the ſteams of candles, as well as the effluvia of their own bodies, the blood is much ſpoiled; which accounts for the debility of their nerves, and their being often affected with nervous fevers. Aſthmatic people cannot bear the air of rooms and cities, where much fewel is burnt; and find moſt eaſe in ſummer, when fires are leſs frequent.

I have known fits of aſthma come on juſt before a thunder-ſtorm.

Moiſture relaxes all animal, as well as vegetable fibres. Such diſeaſes therefore as proceed from laxity, muſt be the common diſeaſes both of moiſt ſeaſons, and of moiſt countries. To the relaxation of the fibres by moiſt air are owing many ſymptoms, which human bodies feel in moiſt weather.

Dryneſs of air, by producing oppoſite effects, produces oppoſite diſeaſes.

Cold air braces the fibres, not only by its condenſing quality, but likewiſe by congealing that moiſture which relaxes. By bracing the fibres more ſtrongly, condenſing the fluids, and giving a ſtimulus, it produces that ſtrength and activity, of which people are ſo ſenſible in froſty weather.

There is a degree of hot air, which, though not ſufficiently ſtrong to dry or deſtroy animal fibres, yet lengthens and relaxes them, ſo as to occaſion the faintneſs and debility ſo often experienced in a hot day.

The air varies in its weight conſiderably at particular ſeaſons of the year, and according to particular ſituations. How different on the tops of mountains and in the bottoms of mines!

It is known, that miners are forced to imitate Nature's way of correcting the air, by ſhafts, artificial winds, bellows, and ſetting fire to the ſulphureous ſteams.

In ſalt mines, indeed, great numbers of people enjoy perfect health without coming above ground.

Steams of vinegar reſiſt putrefaction by impregnating the air with its powers.

If the height of the mercury varies but one inch, it ſhows in the air a difference of one thouſand pounds weight, which in ſlender habits muſt affect very ſenſibly both the fluids and ſolids.

Reſting in cool air after exerciſe produces many diſeaſes.

SECTION IV.

SEASONS.

AS the ſeaſons differ very widely from one another, ſo we know that they occaſion great change in the conſtitutions of men's bodies, and in the ſtate of their minds, as they produce very different diſeaſes. There was in the time of Hippocrates a manifeſt circulation of diſeaſes conſequent on the ſeaſons; and the ſame thing has been obſerved

obſerved to continue in every country, where epidemic diſeaſes have been regiſtered. See Dr. Sydenham, Rogers, Richa, Ramazzini, Wintringham, Grant, and others.

To know what diſeaſe each ſeaſon may be expected to produce, is the way to oppoſe them with ſucceſs. Thus the ſpring gives birth to inflammatory fevers from ſizy blood, which require, as it is earlier or later, a treatment more or leſs antiphlogiſtic; and we can prevent or mend them by warm cloathing, diluting drinks, bleedings, &c. In that ſeaſon, and in the beginning of ſummer, children enjoy the beſt health, ſays Hippocrates. The ſummer abates the inflammatory ſymptoms, diſſolves the blood, and in proportion to its heat produces more or fewer putrid fevers, and affects the head particularly.

At this ſeaſon, and towards the autumn, old men are in the beſt health. The autumn is with juſtice conſidered as the moſt ſickly ſeaſon in this climate. Moiſture with heat, and ſudden changes from hot to cold, by raiſing much putrid vapour affects the elaſticity of the fibres, deſtroys the fire and vivid circulation of the blood, and diſſolves the humours beyond what a healthy ſtate admits. At the very time that the ſurface of the body requires the freeſt perſpiration, the heat of the air makes the proper quantity of cloathing irkſome to inconſiderate people; from whence it happens, that the moſt putrid effluvia, which ſhould paſs through

the pores of the ſkin, are checked, grow cauſtic, and mix with the blood, while due care is not taken to preſerve the juices from corruption by an antiſeptic regimen; and, when they are corrupted, ſufficient regulations are not obſerved for carrying off the diſorder, with efficacy or diſpatch, by either proper cloathing, detergent medicines, or a ſuitable diet. Nor can we help obſerving with regret, that the large proviſion which the Supreme Benevolence has made againſt the hurtful influences of this ſeaſon, is either neglected, or not underſtood: the cherry, the raſpberry, the peach, the nectarine, the melon, the currant, and the barberry, are only conſidered as articles of luxury; and ſome practitioners forbid the very fruits which Nature intended as her richeſt cordial and moſt efficacious alexipharmac.

The end of autumn, and beginning of winter, chiefly affect people in the middle ſtages of life. The winter itſelf finding the blood in a putrid ſtate condenſes our bodies, and at the ſame time that it makes them elaſtic and active, ſubjects them to vehement diſeaſes, affecting the ſpirits with atrabiliary complaints, or the organs of reſpiration in an eminent degree; an evil, to which the north winds greatly contribute. To ſpeak more at large, fevers of the blood appear in the former, and fevers of the bile in the latter part of the year. In ſummer we ſhould eat leſs, and drink more; in autumn we ſhould avoid fiſh, and every ſpecies of food that promotes

promotes putrefaction, and live chiefly on fruits that will diſſolve and carry off the bile; and in winter we ſhould relax our blood veſſels by light wines, warm drinks, as teas of every ſort, and warm cloathing.

SECTION V.

CLIMATES.

IN this commercial country every one has heard of the difference between hot and cold climates, of the unwholeſomeneſs of ſome of our Eaſt and Weſt India ſettlements, of the different effects of heat and cold on our bodies; how much the ſame ſubſtances tend to a more or leſs putrid ſtate, according to the nature of the climate, or the ſeaſon of the year. A fiſherman of Archangel ſends his fiſh, caught on the coaſt, to St. Peterſburg, at eight hundred miles diſtance, perfectly freſh: the Canadian, who kills his game for winter proviſion at the ſetting-in of the froſts, can depend upon its freſhneſs till the heat of the returning ſpring warns him of its changing to a different ſtate: while the inhabitant of Kingſton, in Jamaica, or of the Havannah, in the iſland of Cuba, knows that what is killed muſt be eaten in thirty hours if he wiſhes it to be freſh.

To have hinted at the influence of climate on our bodies, and on all animal ſubſtances, will be

ſufficient to ſhow what attention is due from both the phyſician and the patient to ward off their pernicious effects.

SECTION VI.

SITUATION.

PHYSICIANS, ancient and modern, have ſhown a particular attention to ſituation: they conſidered the height and lowneſs of the ground; to what winds it was expoſed; its ſouthern or northern aſpect; whether the ſoil was ſandy, gravelly, or clayey: they obſerved, that the local qualities of the air were moſt permanent in calms, and leaſt ſo in winds, as we mentioned above; that mines, grottos, ditches, and valleys, retained the qualities of the air longeſt. They took notice what waters were in the neighbourhood: they found that a gravelly ſoil on the banks of a quick-running ſtream was in general a very healthy ſituation; while a rich and marſhy one, on the ſides of ſlow-moving waters, eſpecially in hot climates, was the reverſe; and that where the waters ſtagnated, it was yet more ſo.

SECTON VII.

BLOOD.

BLOOD is ſuppoſed to be made up of red globules and ſerum, and is certainly found thinner or more denſe in proportion to the weakneſs or ſtrength of the conſtitution. The proportions of ſerum and craſſamentum vary according to the circumſtances of age, ſex, complexion, exerciſe, &c.

Dr. Hales reckons it to contain $\frac{1}{28}$ part of condenſed, conſolidated, fixed air.

Its ſpecific gravity is $\frac{1042}{1000}$ parts, or thereabouts.

When blood flows from a vein of a perſon in health, it appears a homogeneous fluid, though by no means ſuch in reality, whether we conſider the variety of foods which ſupply it, or the ſecretions from it, as ſaliva, bile, urine, &c.

If blood is taken from an artery, it remains gelatinous; if from a vein, it ſeparates into cruor and ſerum, which vary according to the ſize and ſhape of the veſſel, the time of ſtanding, &c. When received in the uſual method and preſerved, the longer it ſtands the more ſerum will ſeparate; and till the heat be about eighty degrees, it will do ſo ſtill more in proportion to the warmth of the place. If it ſtands in nearly its natural heat, no concretion takes place: but if expoſed to ſudden cold, it concretes into an almoſt entire maſs, without

any ſeparation. If received into a number of ſmall veſſels, the ſerum will ſeparate; but the cruor will appear in a greater quantity than if received into larger veſſels. If the veſſel be very ſhallow, the concretion will be more entire than in a deep one; and if received into veſſels almoſt cloſe, it will not ſeparate at all; nor does any ſeparation enſue if the veſſel is agitated as ſoon as the blood is drawn. If the blood is corked up as ſoon as drawn, and ſo as to exclude the air, it remains of an uniform colour: and thus its ſurface appears to be more or leſs affected by the air. If blood is taken away an hour or two after a hearty meal, the craſſamentum ſeems to float in milk, occaſioned by the freſh chyle which mixes with the blood at that time. I have ſeen patients much alarmed at this appearance, from their ignorance of the cauſe.

It is but fair to acknowledge, that experiments made on the blood, by mixing with it different things out of the body, cannot determine abſolutely what effects will be produced by the ſame things when adminiſtered inwardly, where they muſt be ſo much altered by blending with the gaſtric, ſalivary, and other juices in the inteſtinal canal, before they paſs into the circulation: but the effects of cantharides, rhubarb, madder, turpentines, &c. give room to believe, that they do enter the blood unchanged in many inſtances, and may probably be found to do ſo in many more, when time ſhall educe truth.

Phyſicians

Phyſicians and anatomiſts differ in their opinion about the venal and arterial blood. Dr. Haller maintains, that they are in every reſpect the ſame: but the beſt anatomiſts of this country contend, that the venal blood, which the ancients deſcribed as blackiſh, is really ſo, and acquires the bright and florid colour of the arterial blood by the action of the lungs and arteries.

It readily mixes with water, is neither an acid nor an alcali, and does not ferment with either of thoſe ſalts. By ſtanding for ſome time it grows putrid; and this diſpoſition is increaſed by heat.

It produces, by the chymical proceſs, phlegm, a volatile ſpirit, (containing a volatile alcaline ſalt, which Dr. Boerhaave calls ſpirit. alcalin. oleoſ.) and a caput mortuum.

SECTION VIII.

BILE.

THE Bile continuing in its natural ſtate, and flowing in its proper channel, has a mighty influence on the preſervation and welfare of the animal frame. Our digeſtion cannot go on ſucceſsfully without it. The bowels loſe their periſtaltic motion the moment its quality is changed, or the neceſſary quantity is not furniſhed. If its œconomy is deſtroyed, every thing goes to wreck.

So great is its importance to health, that it is perhaps even more to be regarded than the pulſe, the

the urine, the tongue, or the eyes; and the phyſician who underſtands its nature, and can either ſupply it when wanting, or unlock it at pleaſure when it has regurgitated into the maſs of the blood, or fallen upon the brain, cannot only manage with dexterity moſt of the diſeaſes of the firſt paſſages, and many chronical diſeaſes of the worſt tendency, but alſo poſſeſſes the ſecret, known to few, of rendering the treatment of putrid almoſt as ſimple and ſafe as that of inflammatory fevers.

From the largeneſs of the liver, with which every animal is furniſhed, and which a great writer ſtiles the Monarch of the Abdomen, we may collect the peculiar importance of the juices ſecreted by it to the purpoſes of life.

From its diſcharging the cyſtic and hepatic bile into the inteſtine ſo near the ſtomach, we may infer the neceſſity of its being mixed with the food; for, had it been excrementitious, Nature would not have thus mixed it, but would have diſcharged it at once nearer to the colon, or rectum. The ſlower motion of the blood in the vena portarum, through the liver, promotes a large ſecretion of bile; and the ſlower motion of the blood, through all the viſcera which communicate with the vena portarum, is probably the reaſon why theſe viſcera are more liable to obſtructions, infarctions, and inflammations, and of courſe frequently become the ſeat of chronical and grievous diſeaſes; and likewiſe why errors in either the quantity or quality

of

of gall breed ſo many complaints. It is calculated by Borelli, that one pound of bile is daily ſeparated from the liver of a man; and it is propoſed as a problem, Whether too much gall, and that of a healthy conſiſtence, may be generated by a healthy body.

Certain it is, that too many bitters may produce this effect, and diſpoſe to ſo hot a temperament as to bring on vomitings, hæmorrhages, the flux, affections of the mind, or a tabes.

But a defect of bile is the moſt general evil; and that defect is productive of cachexy, dropſy, the hypochondriacal affection, and other chronical diſeaſes. Fat ale, thick air, fat or coarſe foods, tend to conſume its quantity.

It is the opinion of an eminent chymiſt, who was alſo a moſt experienced phyſician, that the bile, in its mixture and craſis, reſembles very much the juices of bitter plants, eſpecially the centaurium minus, whoſe extract differs little from inſpiſſated bile;* and it is very remarkable, that ſuch juices, mixed with acid, alcaline, or ſpirituous menſtruums, produce the very ſame phenomena as bile: the reaſon, probably, why extracts and eſſences of bitter plants have ſuch wonderful efficacy in ſupplying deficiencies of the bile, in reſtoring its loſt quality, and thereby affording a divine remedy for preventing and for curing diſeaſes.†

Yet

* F. Hoffman de Bile medicina & veneno corporis.
† Ibidem.

Yet, ſtrange as it may ſeem, their uſe, if you except extract of gentian, is hardly known in this metropolis.

It is a known fact, that ſtagnating bile putrifies more eaſily than blood; and it is equally known, that any thing corrupted or putrid is an enemy to the human body, impairs its vigour, diſturbs its tranquillity, and perverts its motions. With juſtice therefore we trace the origin of putrid fevers, in phlegmatic and cachectic people, to corrupted bile in the firſt paſſages; ſo that whatever brings up by vomiting, or carries down by purging, the dregs collected in the ſtomach and inteſtinal canal, is of uſe in putrid and malignant diſeaſes.

In ſhort, evacuants that act without ſpaſm, and that do not hurt the tone of the inteſtines, ſuch as bitter pills and neutral ſalts, with other correctors of bile, given early enough, and in ſufficient quantity, ſtrike at the very root of putrid fevers. It is certain, that the blood is by heat diſſolved into a more bilious and excrementitious ſtate; and that this is increaſed as the greater ſtrength, agitation, and heat, ſubſiſt in the body. No ſooner is a ſpaſm brought upon the biliary duct, than the blood is loaded with bile by regurgitation, and a jaundice is often the conſequence. Thickened cyſtic gall, not being able to paſs the common duct, produces the ſame effect as gall-ſtones, or an inflammation in the duct, immediately: and what enſues? The ſkin itches, the body is heated, the

ſpirits

ſpirits are oppreſſed, ſleepineſs comes on, and the ſtools change all at once to a clayey or white colour. Of this every one in thoſe caſes may be informed by his own eyes, if he will take the trouble to uſe them. I know there are phyſicians, and thoſe too of reputation, who laugh at ſuch inſpection: but I will venture to aſſert, that he who makes it with care can tell when the ſpaſm is gone off from the duct, or when it is likely to go off, while they cannot.

The ſtate juſt deſcribed is but the beginning of miſchief. Let it proceed a little farther, and the liver grows full, and often inflamed; the ſanguineous veſſels cannot bear ſo active a fluid circulating in them; the patient is ſeized with fever, and dies of obſtructed bile, or becomes dropſical, when an imaginary, inſtead of the real, cauſe is commonly given for the cataſtrophe.

Hoffman obſerved long ago, that nothing tended more to vitiate the bile, or render it impure, or load it with cauſtic ſalts, than the uſual perſpiration on the ſurface of the body being checked: a circumſtance, which may well be numbered among the moſt general cauſes of putrid diſeaſes in this country, where the natural hardineſs of the people, the violence of their exerciſes, and their inattention to their hours, food, and cloathing, at particular ſeaſons of the year in ſo unequal a climate, ſubject them to fevers of ſuch a ſort as they would not have otherwiſe known in a country where, though the climate is unequal, it is yet temperate.

When the bile is either deficient, or checked in its progreſs to the bowels, "I order," ſays Baglivi,* "a little rhubarb to be chewed immediately before "dinner; by which means the chyle is not diſap- "pointed of ſuch a balſam as the bile, the rhubarb "acting inſtead of it, and breaking down and "purifying the blood."

SECTION IX.

FOOD.

AS mankind remain in a ſtate of nature, or are farther removed from it, their food is more ſimple, or more varied. What would have been conſidered in this iſland as luxury three centuries ago, is now ſcarcely thought ſufficient for our meaneſt labourer. While we find our real wants eaſily ſupplied, our artificial ones almoſt raiſe a famine. How would the Laplander, whoſe rein-deer is all his fortune and all his luxury, or the Indian on the Ganges, whoſe rice is all his food and all his ragouts, ſtare at our markets, and look on them as ſhambles for the lion's den! Nor would any of the followers of the Coan ſchool be leſs ſur-priſed to find, in the chambers of our ſick, jellies, broths, beef teas, Thames flounders, and minced veal; or even our panadas made with blades of mace, or ſtuffed with grains of pepper. I have often ſeen ten or twelve intire grains of black pep-per in half a pint of panada. I

* Bagliv. de Bilis natura, uſu, & morbis.

I mean not by theſe hints to condemn univerſally our full diet, but only to lay before the public the folly of treating a diſeaſe which ariſes from plethora with the richeſt food and moſt heating drinks, as I am ſorry to ſay is done every day, and allowed by thoſe who ought to know better. For inſtance, is beef broth, or, if you pleaſe, beef tea, neceſſary for a patient in a pleuriſy, or inflammatory rheumatiſm; where the nature of his diſeaſe and ſizineſs of his blood require the ſuperfluity to be removed, and the remainder diluted? Is it neceſſary to mention the extreme impropriety of permitting, in putrid fevers, ſo many articles of food, which are of ſuch a nature as to increaſe the quantity of putrid humours? Can a flounder in particular, or more eſpecially fiſh brought from our coaſts to the London market, and already tainted in a greater or leſs degree, be ſalutary food in a putrid fever, where the ſweat, breath, urine, &c. are already offenſive beyond enduring?

If food be taken in too large a quantity, it cauſes a fever; for too large a quantity of juices is thereby poured into the blood, which cannot be eaſily broken down as it ought; ſo that what remains in this ſtate muſt excite a fever, at leaſt till it is diſſolved. The ſtomach being too full is diſtended; and, in its efforts to contract itſelf, both its orifices cloſe: then the food heats, rarifies, irritates, and raiſes a fever. What muſt a body, already labouring with

with fever, not ſuffer from foods that throw in ſuch an addition of feveriſh materials?

Foods conſiſt of animal ſubſtances, or the different parts of vegetables. Animal ſubſtances have different effects on our bodies, according to their particular properties, or according to the ſtate of our bodies, at the time of uſing them.

We have before obſerved, that the ſtate of the air, as to heat or cold, makes a very great difference in the nature of animal ſubſtances: and we have likewiſe ſeen, that in climates where the heat of the air, by Farenheit's thermometer, is between eighty and a hundred degrees, animal ſubſtances grow ſo putrid in a few hours, as to be ſcarcely fit for uſe. Can ſuch be taken with impunity into our bodies, when heated by fever above a hundred degrees, if not tempered by antiſeptic ſauces, ſalt, vinegar, &c.? What ſtate muſt they produce in our juices, when they themſelves have been fed on animals? Of this kind are fiſh of every ſort; all the wild and ſea fowl that live on worms or fiſh, ſuch as ſnipes, woodcocks, geeſe, ducks; and at particular ſeaſons of the year even the granivorous birds, as partridges, chickens, pigeons, partake of the ſame diet with the above named; and all give a more or leſs putrid tendency to our juices, in proportion to the time they have been killed, the ſeaſon of the year, and the ſtate of the body into which they are received.

It is alſo certain, that animals in the ſouthern part of this iſland contain a greater quantity of fat

than

than in moſt other countries; by which, as every one knows, our bodies are diſpoſed to a greater degree of plethora; indeed, ſo great as to put it out of the power of our veſſels (where great exerciſe cannot be uſed) to comminute it ſufficiently: hence the croud of inflammatory fevers ſo common in England, and moſt eſpecially in London and Weſtminſter, where ſo little aſſiſtance can be given towards a perfect ſanguification, from the want of elaſticity, and other requiſites, in an air on which above a million of human bodies are daily fed.

SECTION X.

DRINKS.

IT can ſcarcely be neceſſary to take notice, that no country in Europe contains ſuch a number of fat people as Great Britain. I will not ſay what ſhare its happy conſtitution and laws, or the independence of its inhabitants, have in producing this effect; but am well perſuaded, that its ſtrong, and often fatal drinks, tend to fill the blood-veſſels immoderately. It is probable, that the great want of attention to our cloathing, and our little regard to hours and ſeaſons, contribute not only to occaſion many of our inflammatory fevers, but alſo to promote a mixture of inflammatory with putrid ones. Witneſs the number of bad autumnal diſeaſes, which will not yield to any treatment but ſuch as is both antiphlogiſtic and antiſeptic.

SECTION XI.

OBSTRUCTED PERSPIRATION.

HE who is unacquainted with the nature of the Sanctorian Perſpiration, as it is called, and knows not how much our health depends on the preſervation of its juſt balance, is neither qualified to give directions for preventing diſeaſes, nor to cure them with ſucceſs.

To regulate and enlarge our ideas on a ſubject of ſuch importance, Sanctorius, and one or two Engliſh writers beſides, muſt be peruſed with attention.

Suppoſe a perſon in perfect health, living in a temperate climate, but not very ſtrong naturally, or not braced up by the cold bath, or long journeys on horſeback: let him leave off an under waiſtcoat, while the weather grows ſuddenly worſe, and the wind ſettles in a colder quarter: what will be the conſequence? An inflammatory fever, or a bad cough, which, with a very little more inattention, ends in a phthiſis. Yet, how few phyſicians enquire into the cauſe, or are careful to guard the patient againſt it for the future! Suppoſe two perſons removed to the torrid zone, and landed there in perfect health: let one of them immediately cloath himſelf in the manner of theſe climates: what will happen? A checked perſpiration, and perhaps the yellow fever; ſo rapidly is the bile, by ſuch inattention, regurgitated into the blood. In

the

the mean time, let our other traveller continue his uſual cloathing, or as nearly ſo as poſſible: he catches a ſlight fever, if indeed any, and ſpeedily recovers. Theſe I know to be facts. The old French inhabitants about Mobille and Weſt Flŏrida go abroad in the morning wrapped up in a blanket, and when the ſun grows hot, leave it off; but wrap themſelves in it afreſh as ſoon as he goes down.

By ſuch care they live to be old men. It is almoſt peſtilential to ſweat in ſummer, and take in the air at the ſame time, if from the ſtate of the weather it ſhould chance to be cold; for all the effluvia of the body are hurried to the ſkin by the heat, and by the ſudden cold are repelled on the vitals.

Men are particularly apt to be ſick in ſummer, becauſe their ſtronger perſpiration, excited by the heat, is more inſtantaneouſly ſtopped by the cold air, eſpecially at night: hence fevers, fluxes, and other ſummer diſeaſes, which many phyſicians impute to very different cauſes, from their not attending to the Sanctorian Perſpiration. It is, by the way, worthy of remark, that thoſe phyſicians, who are circumſpect in what relates to their own perſpiration, and that which is cloſely connected with it, their ſleep, are enabled to live healthy in the midſt of diſeaſes and death.

From what has been ſaid, it will appear of ſome importance, to remind the inhabitants of this over-

grown city, that, unleſs perſpiration be rightly performed, health can neither be maintained, nor recovered; that inſenſible perſpiration through the pores of the ſkin, or by reſpiration through the mouth, diſcharges a far greater proportion of our humours, than all the ſervile evacuations put together; and that much depends on the knowledge how to promote or leſſen it according to the wants of the patient. Suppoſe, for the ſake of the experiment, that he is weighed, and that the perſpiration is found to be diminiſhed; either this muſt on the following days be increaſed, or ſome atonement muſt be made by a large ſenſible evacuation. If, on the contrary, the body returns to the ſame ſtandard of weight every day, without any change in the quantity of perſpiration, no evacuations will be neceſſary, ſince a regular ſtate of health will be preſerved without them.

SECTION XII.

CLOATHING.

FROM our natural texture, effluvia, more or leſs putrid, are always paſſing through the pores of animal bodies. Whatever checks the perſpiration of ſuch effluvia, ſuddenly proves a principal cauſe of bilious and putrid fevers. The reſiſtance in the extremities, occaſioned by this ſtopped perſpiration, completes the cauſe.

Though

Though it is a diſputed point,* whether Hippocrates was acquainted with what is now called the Sanctorian Perſpiration; yet he had obſerved the bad effects of Thin Cloathing, and cautions men to guard againſt the approaching cold of autumn, by a warmer habit. Celſus gives the ſame good counſel.

The Dutch have learned, that warm cloathing alone makes their country habitable. The neceſſity of this doctrine's being underſtood by the ſubjects of the Britiſh empire in every part of the globe, is really become ſo ſerious, as to require the ſtrongeſt arguments to enforce it; for they have never yet paid it the leaſt attention.†

Having ſerved three campaigns in the Britiſh army, and belonged to it for many years, my zeal for its welfare will plead my apology for offering a hint with regard to the very inſufficient cloathing of the greater part of our troops.

I have ſeen above half their number rendered unfit for ſervice, before the campaign was nearly over, by

* See Archbiſhop Secker's Theſis on Perſpiration.

† Did the natives of Great Britain and Ireland, whoſe occaſions carry them to our Weſt-India ſettlements, wear ſhort cloth waiſtcoats, made like thoſe of the huſſars, it would in that caſe be of little conſequence, whether they had ſilk or calico upper coats, or none. Such an expedient would be a better ſecurity againſt the fatal effects of that climate, to northern Europeans, than any method hitherto practiſed. I have known two or three young men return from Jamaica, who, having never quitted their cloth waiſtcoats there, never ſuffered from its diſeaſes.

the ſhort coats of our ſoldiery. If the mode practiſed by the 25th regiment, of a light blanket, or a plaid, like that of the Highland regiments, which both defends againſt the wet, and ſerves as a blanket in the fields, or in the tents, were generally adopted, it would, I am well perſuaded, prove a very great ſaving of brave troops, and give the King, and his General Officers, a freſh opportunity of ſhowing their ſolicitude for the comfort, as well as health, of ſo reſpectable a body of men. Some of the German troops, particularly the Pruſſians, were rendered fit for their winter campaigns chiefly by their comfortable cloathing.* I know a Captain in the navy, of the firſt reputation, who never unneceſſarily, in moderate weather, ordered the ſails to be furled while wet; having obſerved, that the health of his crew was much affected, if he omitted ſo humane a precaution. Dr. Sydenham obſerves, that the laying aſide of our winter garments too early in the ſpring, and our expoſing our bodies, when overheated, to ſudden colds, have deſtroyed more men than famine, peſtilence, and the

* Though the cloathing of the Auſtrian infantry (a ſort of great coat with a cape to it) is more comfortable, on account of its warmth, than the coats of the Britiſh infantry, it ſtill has diſadvantages, to which the covering I propoſe is not ſubject; theirs not being ſo eaſily cleaned, and not ſerving the valuable purpoſes of a thin blanket in the tents; and what I conſider as the worſt circumſtance of all, thoſe great coats remaining wet on the body, perhaps very much heated by marching. The garment of Dejanira was ſcarce more deadly.

the ſword.† It has been aſſerted, that Boerhaave's favourite and quaint recipe for health, was to leave off our winter cloathing on Midſummer day, and to reſume it on the following. Finally, I am convinced, that the little attention of the army and navy to the article of warmth, and dry cloathing, has occaſioned to this country the loſs of more people than all our engagements and battles together. There is not, perhaps, any method for preventing the prevalence of putrid fevers ſo certain, as putting on our winter dreſs (if we muſt dreſs differently at different ſeaſons) in the middle of September, ſince at that particular period our juices are moſt diſpoſed to putrefaction; and what is then commonly worn, is by no means ſufficient to keep up a proper perſpiration of the putrid effluvia.

† De Febr. Intercurrent.

CHAPTER II.

CHAPTER II.

SECTION I.

GENERAL SYMPTOMS OF FEVERS ARE FOUND IN THE PULSE.

IT is certain, that Hippocrates was not very knowing in the doctrine of Pulſes; at leaſt, that he has done little more than mention the pulſe, without applying it to the treatment of diſeaſes; and that Celſus and Araeteus Cappadox were among the firſt who paid attention to the pulſations of arteries.

Celſus gives the preference to that phyſician who was ſuppoſed to be beſt acquainted with the pulſe, recommends feeling the pulſe in both arms, and remarks, that it ſhould not be felt at the phyſician's firſt coming in, leſt the patient's ſolicitude about himſelf on that occaſion ſhould, by affecting it, miſlead the obſerver.

It appears however, that phyſicians in general were not attentive to the pulſations of arteries before the time of Herophilus, a diſciple of Praxagoras, who flouriſhed at Alexandria in the reign of Ptolemy Lagos: he added the doctrine of pulſes

to

to the ſemeiotic part of phyſic; Archigenes improved on him; but to Galen was left the honour of reducing the doctrine in queſtion to an art, of which the knowledge is ſo important in the treatment of fevers.

Thus much is very certain, that none of his predeceſſors have deſcribed its variations with the accuracy which he has ſhown. So nice a judge was Galen of the pulſe in fevers, that from its perfectly natural ſtate he knew the fever-fit had been an ephemera, while in the moſt perfect intermittent it was not ſo; for that, when the patient had more or leſs wearineſs, head-ache, or pain in the back on ſitting up, he had likewiſe a quicker pulſe. It were to be wiſhed our modern practitioners in general could diſtinguiſh with equal exactneſs, inſtead of affecting to laugh at his accuracy.

It was likewiſe obſerved, in the flouriſhing days of phyſic, that the pulſe was influenced by the age, ſex, temper, habit of body, ſeaſons, and ſtate of the mind, no leſs than of the artery itſelf.

"The two diſtinct motions of the artery," ſays Boerhaave, "when it is dilated by the blood "thrown into it from the heart, and when it is "contracted by the elaſticity of its muſcular fibres, "which propels the blood through it, are called "the Pulſe; ſo that the pulſe aſcertains the exact "condition of the heart, the diſpoſition, quantity, "and motion of the blood; and, by conſequence, "all

" all our juices, as well as the various ſtate of the " artery itſelf.

" It is therefore evident, that the obſervation of " the pulſe is of the utmoſt moment in diſeaſes." See Boerhaave's Inſt. Sect. 958.

Nevertheleſs, how common is it for the phyſician, feeling the pulſe of his patient, to be converſing with him all the while, and on a ſubject naturally agitating to the latter, who, perhaps, is ſtanding on his feet, inſtead of being in a poſition of repoſe; when the former decides at once with a haſty conjecture on the propriety or impropriety of bleeding, though life or death may be the conſequence! No wonder that ſuch ignorant pretenders ſhould deride the uſe of a pulſe-watch, without which, if the pulſe beats above ninety in a minute, I am bold to affirm, that the moſt experienced practitioner, who has never made uſe of it, ſhall not be able to ſay, within ſeven or eight pulſations, with what velocity the heart beats; when by uſing ſuch a watch he might determine it with certainty, and often ſatisfy himſelf about the time and iſſue of the fever.

The pulſe in health is commonly ſlow and equal; and the more it varies from that ſtate, the more it marks the diſeaſed ſtate of the body. In a perſon, of whoſe blood the texture is healthy, and who is at the ſame time entirely free from fever, the pulſe is generally under ſeventy in a minute. Sometimes, after an inflammatory fever, it falls

to

to fifty; but the ſtruggle muſt have been a long one to reduce it ſo low.

In Putrid fevers, and in the Miliary or Lymphatic fever, the pulſe, when the diſeaſe is at all manageable, ſeldom exceeds one hundred and forty-four; and when the danger is over, comes down to ſixty, fifty, or even forty-four. I ſaid, When the danger is over; for I ſcarcely remember, when the pulſe was become ſo ſlow, to have ſeen any perſon under ſeventy years of age die of a fever, if treated throughout on an antiſeptic plan. I ſaid, Throughout; becauſe at this point of time, in long putrid or nervous fevers, when the pulſe is come down, and the patient is getting into a ſtate of ſafety, the antiſeptic plan is commonly changed, on a miſtaken ſuppoſition that the diſeaſe requires either a new ſtimulus, by bliſters, or more cordials, (I do not ſpeak of wine) ſpices, or tinctures made of them; broths, jellies, volatiles, and other foods; and the patient is once more driven out to ſea, when he probably ſinks, like the ſhip-wrecked mariner, who periſhes in ſight of land.

When the pulſe is feeble, it ſhows that the powers of circulation are weakened, or that the body is exhauſted, or that the blood is ſo accumulated in the obſtructed veſſels, as not to leave, of that which is circulated freely, a ſufficient quantity to dilate the arteries.

"The concoction of the feveriſh matter," ſays Van Swieten, "and the expulſion of it from the

"body

" body by critical evacuations, or a depoſit to ſome " particular part, requiring ſtrength of circulation, " it follows, that a weak pulſe muſt always be a " bad omen; as, on the contrary, a ſtrong pulſe " muſt be a good one: and, happily, this laſt " may at all times be reduced, by blood-letting " and other remedies, to a moderate ſtate, if it " ſhould become too ſtrong; whereas the difficulty " of reſtoring the vital powers, when exhauſted in " diſeaſes, is exceeding great. In perſons dying, " the pulſe is always weak, and very quick, almoſt " paſt reckoning, and at times very unequal in its " beat, predicting but too clearly the approaching " event." Though it muſt be acknowledged, that about the times of the criſis of fevers, great changes happen in the pulſe; yet, by attending to the concomitant circumſtances, thoſe changes are eaſily diſtinguiſhed from the ſtate above mentioned.

SECTION II.

COLD AND HOT FIT.

FEVERS ariſing from internal cauſes are generally uſhered in by a ſenſe of Cold in the back and extremities. This is not the caſe where they ariſe from violent exerciſe, over eating, too much wine, and other ſtrong drinks, or too much venery.

The ſenſation of cold between the ſhoulders, as if the wind came upon them through a crevice, or

as

as if cold water was poured down between them, and all along the back, is more ſevere, and continues for a longer or ſhorter ſpace of time, in proportion to the ſeverity and duration of the enſuing diſtemper; ſo that we can from theſe ſymptoms form a tolerable judgment as to the quality of the fever, and the quantity of the danger. It deſerves notice likewiſe, that fevers are more or leſs dangerous according to the degree of Heat which attends them; for great heat ſpeedily deſtroys the tender veſſels of the brain, lungs, liver, and other viſcera, none of which parts can ſuſtain a rapid circulation for any time without ſuffering extremely.

I have ſeldom, for my part, been able to aſcertain, by the touch, the difference of heat on the ſkin, on which many phyſicians depend for diſtinguiſhing the different ſorts of fevers.

SECTION III.

DIVISION OF FEVERS INTO PUTRID AND INFLAMMATORY.

WE hinted, in the Introduction, what fatal effects attend the miſtaking of a Putrid for an Inflammatory fever, and the neceſſity of diſtinguiſhing one ſort from the other. Although the ſymptoms of both may, and actually do, correſpond in ſome particulars, at the beginning eſpecially; yet we hope to mark ſo ſtrongly their diſtinguiſhing ſymptoms,

ſymptoms, as to leave the matter leſs in doubt than hitherto, and to prove, that the phyſician who is beſt acquainted with the pathognomonic ſigns, and knows them at the firſt ſeizure, is moſt likely to treat them with ſucceſs.

A thorough knowledge of the Diagnoſtic art lies indeed at the very foundation of a ſound practice. Among the writers who have diſtinguiſhed themſelves by their ſkill in this way, Cælius Aurelianus, a Numidian, who probably lived before the time of Galen, ſtands foremoſt, having, as ſome author obſerves, painted diſeaſes with colours taken from Nature herſelf. It muſt be acknowledged however, that the phyſician cannot always, at the firſt viſit, ſay what the diſeaſe is. A very accurate obſerver uſed to employ the firſt day of his attendance in acquainting himſelf exactly with the occaſional, antecedent, and preſent circumſtances of the patient's caſe, without ordering any thing that could diſturb the periods of the diſeaſe, or interrupt the continuance of its real character and natural aſpect: and happy it is both for the patient and phyſician, when the caſe is thus an object of attention from the very beginning. We hope then to demonſtrate, that the diviſion we have made of fevers, into Putrid and Inflammatory, or a Mixture of both, is juſt. Of this diſtinction, and of the general treatment, the experienced and learned Ballo-

nius ſeems to have entertained a very proper idea.*

SECTION IV.

PUTRID FEVERS.

PUTRID Fevers carry terror in their very name. To explain their nature, cauſes, diſtinguiſhing or pathognomonic ſymptoms, and to aſcertain their cure at large in all their varieties, is the chief object of this enquiry. That ſuch were known or ſuppoſed to exiſt in ancient times, is not even a queſtion. "It is not unuſual," ſays Hippocrates, "to paſs from this fever (he had been ſpeaking of "the ardent fever) to that called Lipyria, and, "after forty days continuance, to that called "Epiala. The Lipyria attacks and remits the "ſame day, attended with a pain in the head: if it "is not worn out within forty days, but extended, "the pain of the head alſo continuing, attended with "delirium, the patient is then to be purged." In another place, he ſays, "Lipyrian fevers are not "carried off without a cholera, or great diſcharge of "bilious matter." Theſe are proofs, beſides what he

* Febres aliæ ſunt venoſæ, aliæ ſunt γαστρικοι, i. e. quædam ſequuntur potiùs venoſi generis, quàm vitium humorum in præcordiis contentorum. Quæ venoſi ſunt generis, hæ primo quoque tempore per phlebotomiam ſolvuntur; contra, potiùs cathartico egent: ut non mirum ſit, ſi quaſdam febres veluti miraculo tollat phlebotomia, aliæ potiùs exacerbentur.

Ballonii Epidemicor. & Ephemerid. lib. ii. p. 78.

he advances in his third Epidemic, and elſewhere, that the old phyſicians were acquainted with putrid fevers full of crudity, of very long duration, and cured by natural or artificial evacuations of bile.

Galen ſays expreſsly, that "where the juices "putrified alike in all the veſſels, but eſpecially in "the large ones, it was underſtood to be a Conti-"nued, or Continual Putrid fever." They did not indeed conſider, under the name of Putreſcency in fevers, ſuch a corruption of the humours as happens in dead bodies, but only a remarkable degeneracy in them from their natural ſtate. We know that even ſound juices, either left in quiet, or in a certain degree of heat, or that are very much ſtirred, acquire a tendency to putrefaction; and that their natural propenſity to this ſtate increaſes in proportion to their motion and heat, though they do not arrive at the ſtrongeſt degree of it: for their acrimony goes on to affect the brain and cerebellum in ſuch a degree, as to deſtroy, before the juices turn quite putrid. But the progreſs towards a putrid ſtate is in proportion to that tendency; therefore a fever is called Putrid, which is owing to more active cauſes than mere inflammation, viz. to obſtructions of the viſcera, of the ſkin, of the capillary veſſels, and, by conſequence, to a peculiar and active acrimony: for violent exerciſe, checked perſpiration, or crapula, where there is nothing more material, produces an Ephemera, which is cured within the twenty-four hours by

abſtinence, or bleeding, or dilution, or a ſweat; whereas the other, which is deſervedly called Putrid, is owing to a greater degeneracy in the humours from their natural ſtate, increaſing in malignity according to their degree of degeneracy. Thus, though the juices are ſtopped in any particular part, as in a pleuriſy, or phrenzy, the blood yet circulates freely elſewhere, and therefore cannot be called Putrid, as the humours are not degenerated materially, and the diſeaſe is generally diſſolved; while in other caſes, the blood having acquired a ſtate that does not admit of its ready circulation, and beginning to ſtop in the intricate parts of the viſcera, all the capillary veſſels become obſtructed, or at leaſt admit the juices with difficulty, and of courſe produce great friction, and greater heat; two cauſes that account for many of the worſt appearances of fevers, mortal ſtaſis in vital parts, or perhaps ſymptoms of the moſt fatal tendency. When the conſtitution, climate, ſeaſon, ſituation, diet, and other prediſpoſing cauſes, have prepared a body for a bilious fever, a little more derangement is all that is wanting to excite it. For inſtance, thinner cloathing, ſitting up a whole night, even in healthy air, and in a habit otherwiſe healthy, gives a check to the perſpiration: a ſmall addition of heavy food that is fat, rancid, or coarſe, produces a ſickneſs, and this perhaps a ſpaſm in the common gall duct: the conſequence is, that the bile regurgitates in a ſmaller or greater proportion, and an additional

ſtimulus

ſtimulus is mixed with the blood; a ſhivering fit, quick pulſe, and heat come on; and thus a Bilious fever is produced. Let the humours be ſpoiled a little more, and the obſtruction of the viſcera increaſed by an improper diet of wild fowl, broths made of long-kept meats, or fiſh, jellies, &c. the heated habit increaſes the tendency to putrefaction, and we have the Remitting fever, or the Continual Putrid, commonly called Putrid. Place ſuch a patient in an hoſpital, and an Hoſpital fever is produced. Add to this ſtate the anxiety of a criminal about his impending ſentence, and the murky air of a jail, and you have a Jail fever. Add infection ſui generis to unventilated air, or the mephitis of a common-ſewer, or of a putrid body, and you have the Scarlet, or Spotted fever, or the Malignant Sore-throat. Once more, produce an infectious ſtate of the air, conveyed immediately from a body ill of the ſmall-pox, peſtilential fever, or the plague, (the Θειον τι of antiquity) and the Peſtilence will enſue. Pay no attention to the neceſſity of changing the air or bed-linen, give putreſcent drinks and meats, heat the circulation by volatile ſalts or the ſpirit of putrefaction, and you render the calamity incurable.

SECTION V.

SYMPTOMS DISTINGUISHING PUTRID FEVERS FROM INFLAMMATORY ARE FOUND IN THE LOW STATE OF THE ANIMAL SPIRITS.

THE influence of the mind upon the body is univerſally acknowledged: the ſhare which its affections have in producing the worſt ſort of fevers has been likewiſe remarked: but I know not, that the low or equal ſtate of the Animal Spirits, in fevers, has been yet conſidered as indicatory of a putrid or inflammatory diatheſis; nevertheleſs, I believe the attentive obſerver will ſcarcely find any ſymptom more pathognomonic. In the bilious, or putrid fever, the patient is continually taking the alarm about himſelf, attending to every minute circumſtance, and expecting the ſame attention in the phyſician, looking for his viſits with uncommon impatience, calling continually for cordials or wine on the leaſt faintneſs, and in many caſes expreſſing an anxiety about himſelf, which thoſe who are not acquainted with the depreſſing effects of putrid effluvia, or juices mixed with the circulation, would conſider as ſtrong marks of puſillanimity, and which would, even in a female, offend the by-ſtanders, as a piece of affected delicacy. In confirmation of what is now advanced, it is only neceſſary to obſerve the ſudden dejection of ſpirits ariſing from checked perſpiration, or

any

any obſtruction in the biliary duct. This, perhaps, is a more natural way of accounting, why the affections of the mind produce fevers of the moſt fatal kind, than by the theory of Spaſms, which has filled the ſchools of phyſic ſo much of late: at leaſt, I am ſure, that the effect of our prophylactic powder,* in diſcharging the bile, leading the ſalts of the blood to the bowels, or to the kidneys, and thereby preventing fevers that were juſt ſetting in, corroborates the obſervations contained in this ſection.

SECTION VI.

SPECIES OF PAIN.

IN putrid fevers the head-ach is more oppreſſive than violent; not uniform in its degree, nor conſtant and unabating; commonly felt as if ſeated in the bottom of the ſkull, reſembling very much the head-ach ſo often experienced in a heated play-houſe, or crouded aſſembly; and not very unlike that which, in many conſtitutions, attends the application of bliſtering-plaſters to the body.

It is found more tolerable in a reclining than erect poſture.

A pain in the head, ſuch as I have deſcribed and alſo a pain in the ſmall of the back, except in caſes of ſmall-pox or meaſles, is a general attendant

* See our Forms of Medicines.

on putrid fevers, and may be regarded as a kind of pathognomonical ſymptom.

SECTION VII.

SICKNESS.

A Variety of cauſes contribute to the Sickneſs ſo common in the beginning of fevers. What theſe are, ſhould be very well underſtood: for if, when the fewel of the fever is not contained in looſe matter, or adheres to inflamed parts, vomits are given, they prove very dangerous; ſince with ſuch treatment the patient may die of an acute inflammation. Even Dr. Sydenham did hurt in this caſe, as he himſelf confeſſes. If, on the contrary, the ſickneſs be owing to a load of putrid materials about the ſtomach, or cæliac ſyſtem; emetics, and ſuch correctors of bile, as imperiale, oxymel ſimplex, decoctions of farinaceous ſubſtances, or of tamarinds, will be the beſt and ſpeedieſt means of removing it.

Where theſe methods do not take off the ſickneſs, it is a mark of ſomething noxious in the habit, and ſhould awaken the utmoſt vigilance of the phyſician.

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SECTION VIII.

WATCHFULNESS AND DELIRIUM.

THERE are few ſymptoms, in fevers, more alarming than Watchfulneſs. In putrid fevers it is generally the forerunner of Delirium or convulſions; and, if its cauſe be not very ſlight, is juſtly conſidered as dangerous. The means of preventing or curing it has ever been a chief deſideratum in treating the infinite variety of diſeaſes of that claſs. So much attention was paid to this appearance in old times, that the Father of Medicine takes the alarm at it; and Araeteus, the ſecond great writer of antiquity, was ſo ſollicitous to remove it, as to have left very little new to be ſaid on the ſubject, if chymiſtry had not paved the way for diſcovering preparations more adapted to cure it.

"Watchfulneſs ariſes," ſays a great phyſiologiſt,* Sect. 856. of his Inſtitutes, "from too ſtrong a "direction of the nervous fluid to the organs of "ſenſe; from any irritating body, where-ever ap- "plied, that twitches theſe organs, particularly "the brain itſelf; from too great a motion of the "humours; from fevers, phrenzy, &c." And he adds, "too much watchfulneſs rubs down the fineſt "parts of the brain, increaſes acrimony, exaſperates "the bile, and produces feveriſh delirium."

The

* Boerhaave.

The cauſes have been looked for not only in the brain itſelf, but in that general conſent which is obſerved to obtain among all the nervous parts, as well as in the influence of the ſtomach and belly upon the head, or of the head upon the ſtomach and whole ſyſtem. It was found, that the quickneſs of the circulation often ſeemed to bring it on; witneſs the delirium attending the paroxiſms of quotidian, quartan, and even ſome vernal tertian agues: ſo that whatever hurries the pulſe is apt to occaſion watchfulneſs, which, long continued, produces this ſymptom. Foulneſs in the ſtomach is frequently the cauſe of it; for it has been often cured by a vomit, where that was indicated by the foulneſs of the tongue, a bitter taſte, vomiting, ſickneſs, and anxiety. It often proceeds from obſtructed viſcera, infarcted primæ viæ; for a doſe of proper deobſtruent phyſic, of neutral ſalts and rhubarb, ſhall remove the ſigns of its approach.

In bilious and putrid fevers the patient cannot ſleep, though he is neither prevented by head-ach nor pain: he remains in this ſtate of watchfulneſs for forty-eight hours, perhaps four or five days and nights, often longer, brooding only on uncomfortable ideas, unable to dwell on ſoothing ones: the delirium is then at hand, and ſhows itſelf in a variety of degrees, mild or leſs moderate, gay or grave, joyous or melancholy, frightened or unconcerned, outrageous or ſullen, according to circumſtances. The counſel of the old phyſicians, together

together with ſuch conſiderations, have led medical men to diminiſh the quantity of humours, by diverting their force to ſome other quarter, by taking away or abating the ſtimulus, as by epiſpaſtics of leven, vinegar, frictions, or pediluvia, or by diluting and attenuating the humours ſo as to procure their free paſſage through every part of the ſyſtem. What we have found moſt effectual for this purpoſe will be ſeen in the proper place.

SECTION IX.

OF THE COLOUR AND TEXTURE OF THE BLOOD.

IN ſuch fevers the Blood is fuſed, diſſolved, and ſometimes quite thin and ichorous. The ſame ſort of blood is taken from thoſe who have thrown themſelves into putrid fevers, by ſwallowing large quantities of ſpirit and ſalt of hartſhorn, or who have lived long on putrid food, or who have the true ſcurvy.

In fevers of the putrid ſort, ſuch as the ulcerous ſore throat, the ſlow fever, malignant fevers of camps and jails, the petechial fever, or what is called the ſpotted fever, blood drawn away at the beginning, and when there are ſome equivocal ſymptoms of inflammation, as well as of putrefaction, has a cruſt of blue, or bluiſh-green ſize on the top, and is alſo often glutinous, while the inferior part of the craſſamentum is like liquid gore.

gore. In leſs full habits there is no cruſt on the ſurface; but the blood, in the looſeneſs of its texture, reſembles new-made curd.

SECTION X.

APPEARANCES OF THE TONGUE.

I Once aſked a young friend, Whether he had learned to pay any particular attention to the appearances of the tongue in fevers? He anſwered, "Yes, Sir, that the patient might not think me "inattentive to any thing which could help to "explain the nature of his diſeaſe; but I knew "very little of the matter, and none of my maſters "ever gave me any information on that ſubject." It is to be feared, that many phyſical men in this town could not give a better anſwer. In the mean time, I muſt be of opinion, that the different Appearances of the Tongue in fevers aſcertain the ſtate of the diſeaſe, its nature, and the proper mode of treating it, better than even the pulſe itſelf; for while the laſt diſcovers the quantity of danger, and perhaps the ſtate of the circulating blood in inflammatory caſes, the tongue alone aſcertains the quantity of bad juices, the degrees of diſorder in the blood and lymph, with the true ſtate of the ſalivary, gaſtric, and abſorbent veſſels, and of all the chylopoetic viſcera.

The tongue, in perfect health, is of a pale red, and moiſt. With this appearance every phyſician ſhould

ſhould be intimately acquainted; for, otherwiſe, he will never be able to diſtinguiſh its changes from a natural ſtate: in doing which he muſt conſider the point, the ſides, the middle, and back part, ſince all theſe are variouſly affected, according to the ſtate of the blood, of the lymph, of the animal ſpirits, and the time of the fever. The effect of anxiety on the tongue furniſhes a curious phenomenon; for in half an hour the delicate pale and moiſt red of the whole tongue changes into a white or yellowiſh glare. Remove the cauſe of anxiety, and the tongue returns to its natural colour.

As the whole ſet of putrid fevers ariſe from vitiated juices, and are juſtly called Camp, Hoſpital, Jail, Bilious, Putrid, Malignant, or Petechial fevers, according to the degree in which theſe prevail, ſo there is ſcarce any ſymptom ſo explanatory of that degree as the tongue.

The tongue puts on all the variety of colours, from yellow, brown, or green, to violet and black, or purple, juſt as a leſs or greater quantity of vitiated bile or lymph happens to be contained in the veſſels, or inteſtinal canal. In lower degrees of putrefaction it is of a damaſk red, which is ſometimes moiſt, ſo that it ſhall appear almoſt tranſparent. The damaſk red ſhall be quite ſmooth and dry, as if varniſhed over, when the putrefaction is greater.

It ſhall ſometimes be red, with a tendency to black; and the edges ſhall be as if they, no leſs than the tongue itſelf, were covered with a horny ſubſtance:

ſtance: at thoſe times, and in this ſtate, it trembles, is put out with difficulty, and the patient generally forgets to draw it in again. Theſe laſt are marks of the brain's being diſordered, and of that alarming malignity which often attends the petechial and jail fever. If any thing is to be done in this caſe, it is by cream of tartar, and other aceſcent drinks; by a liberal uſe of wine, of camphorated julep, ſpirit. mindereri, and Hoffman's anodyne liquor; by ripe fruits, farinaceous foods and mineral acids. In ſuch a caſe, with the ſkin dry at the ſame time, I never ſaw bark anſwer, whether attended with ulcerated ſore throat or not. If the tip of the tongue grows moiſt, and the hardneſs on the edges gives way to ſuch medicines, there is ſtill ſome bone, eſpecially if the comatoſe appearances come on, and the breathing continue eaſy.

But where the tongue is of a brown or black colour, ſcored like a broiled gizzard, quite dry, and out of the power of the patient to extend it, the juices are in their higheſt degree of putrefaction, and it is almoſt univerſally a mortal ſymptom.

When the tongue appears like a raw beef ſteak, you may prognoſticate an aphthous fever, and will then generally find the aphthæ in the corners of the mouth, or about the velum pendulum palati.

Where the diſeaſe has not laid violent hold of the lymph, there is always ſome degree of moiſture on the tongue, with the colours above ſpecified.

It

It is, I confeſs, very difficult to deſcribe the morbid appearances of the tongue, ſo as to make them perfectly intelligible; but all thoſe juſt mentioned may be obſerved in the variety of putrid diſeaſes, which now infeſt this country. I ſay, Now; for our unequal cloathing, our late hours, our highly-ſeaſoned and long-kept foods, our paſſion for gaming and other anxious pleaſures, have brought upon us a freſh and numerous band of putrid and bilious diſeaſes, unknown to our wiſer and more temperate forefathers.

SECTION XI.

THE DRYNESS AND BLACK GLARE OF THE TEETH.

WHEN the Teeth have no moiſture on them, as if they were dried in the wind, or are covered over with a black glue that ſticks ſo faſt as not to be rubbed off but with much difficulty, it may be conſidered as an inconteſtable proof of the malignity of the diſeaſe.

By ſhowing the brain and nervous ſyſtem to be loaded with putrefaction, it indicates the neceſſity of an antiſeptic diet, of farinaceous ſubſtances, and fruits as well as drinks of the ſame materials; and even a plentiful uſe of the mineral acids, of which the muriatic has always with me the preference. The quantity of diſeaſe will regulate their doſe.

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The matter becoming looſe on the ſurface of the teeth, ſo as to be eaſily wiped off, but eſpecially going off without aſſiſtance, diſcovers the abatement of putrefaction, and admits of a happy prognoſtic.

Baglivi, ſpeaking of the teeth, obſerves in general, that white and clean teeth ſhow a good chylification, or an habitual ſobriety; that when they grow ſoon foul and glary, the digeſtion is weak. He adds, "Take care of the teeth, that "you may digeſt well, and live long: they are the "Kitchen of the Chyle."

SECTION XII.

OF URINE, ITS PALENESS AND CRUDITY.

THE kidneys are ſo conſtructed by nature, as to cleanſe the blood from what is uſeleſs or pernicious; not acting like other glands, that change part of the maſs into liquors of a different nature, as the body requires, but as ſecretory organs only: hence the urine has with juſtice been conſidered, both by ancients and moderns, a very few of the laſt excepted, as moſt likely to furniſh a juſt and perfect idea of the ſtate of our juices, and their component elements. Its ſcarcity, its acrimony, its colour, its thickneſs or paleneſs, not only demonſtrate the condition of the humours, and of the diſeaſe, but alſo point to the requiſite remedies

dies in the way of watery and diluent drinks, beſides ſhowing the degrees of putreſcency at which our juces may arrive.

Since chymiſtry has been underſtood, and applied to the examination of the urine, we know that it conſiſts of a watery lie loaded with the ſaline and putreſcent parts of the blood, and will be more or leſs offenſive according to the greater activity of the veſſels, or as it is loaded with more or fewer recrements of the body.

"Urine," ſays the beſt of phyſicians, "which "is thin and red, and not diſpoſed to ſettle; that "is white, thin, and watery, or ſtraw-coloured, "and not turbid at times; or urine that is always "turbid, and never ſettles, ſhows, in very acute "fevers, retarded coction, much crudity, a "difficult criſis, a long diſeaſe, and the greateſt "danger; and, in inflammatory fevers of the "moſt acute ſort, almoſt certainly portends death: "in moderately acute fevers it indicates a long and "troubleſome diſeaſe." See Boerhaave's Inſtitutes, Sect. 1016.

In ſlow fevers the urine is pale; in the increaſe of the fever the ſediment is ſometimes thick, rough, full of ſcales, and of a whitiſh colour: this furfuraceous appearance never fails to mark a long diſeaſe and a ſevere ſtruggle, but manageable by great attention.

How much contempt ſhould light on thoſe careleſs or unconſcientious men who come and go to and from the bed-ſides of their patients, in every

ſort of fever, without attending to the urine, or paying the leaſt regard either to its flattering or fatal phenomena!

SECTION XIII.

COLOUR AND SMELL OF THE FÆCES.

IT is not uncommon to hear the witlings in phyſic affect to deride an inſpection of the Fæces. I have ſeen a grave phyſician join in the ridicule. But it is not therefore the leſs true, that the Colour, Conſiſtency, Materials, and Smell, are all indications of the ſtate of the diſeaſe, and the progreſs of the cure. He who has the care of a jaundiced patient can, by inſpection of the fæces, tell whether the medicines have unlocked the biliary duct, ſooner than by any other mark, and can ſurpriſe the patient, when that is the caſe, with the promiſe of an immediate cure. He who can diſtinguiſh by the colour and conſiſtency, whether the black or corrupted bile is looſened, which ſhall often not happen till near the concluſion of a putrid fever, can prognoſticate, that the diſeaſe is almoſt at an end; while thoſe who are regardleſs of ſuch circumſtances, remain almoſt as ignorant as the lookers-on. Add the ſatisfaction and utility of knowing that the method of cure is ſucceeding. When the patient obſerves the ſolicitude of his phyſician about removing the putrid contents of

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the inteſtines, he will the more readily aſſent to a plan which is often, no doubt, very tedious, though very ſafe, and perhaps the beſt, if antiſeptic purges are adopted, and perſevered in with ſpirit. We may ſubjoin the advantage of knowing by the ſmell, whether a fatal prognoſtic may be hazarded or not.

SECTION XIV.

QUICKNESS AND INEQUALITY OF THE PULSE.

THE old writers reckoned much upon their power of diſtinguiſhing by the Pulſe, whether the fever was an ephemera, or a continued fever, or a continued putrid fever. In the two firſt the pulſe was equal and ſtrong, not very much exceeding that of perfect health; but in the laſt it was quicker, and often unequal, as well in ſtrength as in quickneſs, owing, probably, to the blood's being faulty in its conſiſtence, and at the ſame time in an acrimonious ſtate.

Dr. Glaſs ſuſpects, that the quickneſs of the pulſe, in putrid fevers, is chiefly excited by the acrimony of the putrid humour irritating the heart and arteries; and the ancient phyſicians very wiſely regarded other diagnoſtic ſigns. A quick ſtroke of the pulſe, with pale crude water, or an unequal pulſe, attended with a great and ſcorching heat all over the frame, was Alexander Trallian's rule for knowing a putrid fever. Thoſe acrid humours in

the ſtomach which may be removed by a vomit, the cold fit of an intermittent, and the criſis of a fever, they found to produce the ſame ſort of inequality: and Galen eſtabliſhed it as a maxim, "that a ſmall and irregular pulſe was a mark of the "ſtomach's being loaded with foul humours." M. Med. lib. xii. c. 3.

Thoſe who have weak ſtomachs, and a weak digeſtion, have always a ſmall pulſe: it is neceſſary to know the firſt before we can judge of the laſt.

The pulſe is commonly quick and frequent in a putrid fever.

It was an opinion of Galen's, that when the pulſe did not ſtrike hard againſt the finger, it was occaſioned by the putrefaction of the juices.

There is the ſame ſort of pulſe in eryſipelatous, camp, and petechial fevers.

In nervous and eruptive fevers, attended with oppreſſion, the pulſe never fails to be ſmall, frequent, unequal; and then the cauſe is probably in the ſtomach and inteſtines, or originated there. In ſuch caſes the pulſe grows better in proportion as the ſtomach is cleared. Purging was found by Dr. Huxham to raiſe the pulſe in the Devonſhire colic. I have made the ſame obſervation in moſt putrid fevers.

The quantity of fever and its degrees are generally eſtimated by the quickneſs of the pulſe.

Having, I think, evinced the peculiar importance of attending moſt minutely to the ſtate of the pulſe,

as

as one of thoſe circumſtances about the ſick, that give moſt light into the nature of the fever, the ſtrength of the patient, and the indications for the cure, I take the liberty again to mention and recommend the Pulſe-watch, as the only certain method of forming an accurate judgment with reſpect either to the velocity or the equality of the pulſe, and thereby furniſhing a principle to proceed upon, at once ſatisfactory to the patient and the phyſician.

SECTION XV.

INFLAMMATORY FEVERS.

THE Greek phyſicians attended to the ſymptoms of Inflammatory Fevers, deſcribed and diſtinguiſhed them with ſuch accuracy, and treated them with ſuch incomparable judgment, as to put it out of the power of the moderns to give much additional information.

They knew from reaſon and obſervation, that plethoric people, while in the moſt perfect health, were in the greateſt danger; and that hard-working men, and men of ſtrong fibres, were particularly liable to inflammatory diſeaſes: and we know by philoſophy and mechanics, that men are plethoric who are in ſuch a ſtate of fullneſs, that if the humours ſhall ſwell a little more by rarefaction, by exerciſe or heat, the functions of life muſt be inter-

rupted. Wherein is our indication of cure preferable to theirs?

When Hippocrates found that the pleuritic ſtitch did not yield to one or two bleedings, and that the pain flew up to the collar-bone, he repeated it. When he found that fomentation to the breaſt, by rarifying the blood, increaſed the pain and difficulty of breathing, he knew the neceſſity of emptying the veſſels ſtill more, as well as our beſt anatomiſts, and let blood as late in the diſeaſe as we do. If the pleuriſy, or rather the pain in the ſide, did not begin with rigor, he was as well aware as our beſt modern phyſicians, that purging was not leſs neceſſary than bleeding. The Greek phyſicians diſapproved of exerciſe in fevers as much as we can. If they did not take their indications of cure from the ſizineſs of the blood and ſynchroniſm of the pulſation of the arteries, they yet ſaw not leſs clearly the neceſſity of repeated bleedings, even late in the diſeaſe, and the riſk of internal abſceſſes from the neglect of them. In ſhort, their rules, both as to the knowledge of the ſymptoms and the beſt treatment, equal ours, while their directions about the diet excel them; and I believe in my conſcience, that if their country had abounded in beef-eaters as much as this, they would have found the neceſſity, as much as we do, of not truſting to expectoration in the cure of pulmonary diſeaſes.

Though they were ignorant, that attrition was the cauſe of heat, that ſanguification was performed chiefly

chiefly by the ſyſtole of arteries, that the texture of the blood was ſtrong in proportion to exerciſe, they were equally ſenſible with us, that the north wind, the winter ſeaſon, a rigid habit, coarſe food, and high living, produced inflammatory fevers of every ſort.

SECTION XVI.

SYMPTOMS DISTINGUISHING INFLAMMATORY FEVERS FROM PUTRID ARE FOUND IN AN EQUAL AND COMPOSED STATE OF THE ANIMAL SPIRITS.

HAVING taken notice of their unequal ſtate in a Putrid fever, we have only to obſerve here, that the direct contrary happens in an Inflammatory diatheſis. No anxieties are felt by the patient about the event, and little or no depreſſion, comparatively ſpeaking, from the acute pains in the head, breaſt, belly, or limbs. We hear no great complaint of the want of ſleep; nor does either the tedioufneſs of ſome rheumatic fevers, or the delicacy of more tender frames, occaſion any ſtrong expreſſions of impatience; neither is there any riſk of delirium, unleſs where the inflammation primarily affects the brain, as in a phrenitis, or when the inflammatory diſeaſe is becoming deadly in the very laſt ſtage of the fever.

SECTION XVII.

THE SIZINESS AND STRONG TEXTURE OF THE BLOOD.

TO aſcertain the genius of the inflammatory fever, the quantity of that fever, and how far the cure is to be reſted on the lancet, or to furniſh a criterion for judging of the length to which the antiphlogiſtic regimen muſt be carried for the patient's certain recovery, nothing ſerves ſo much as an accurate attention to the Texture and Sizineſs of the Blood; a doctrine, which I hope, before I have done, to demonſtrate. In inflammatory rheumatiſms, in the phrenitis, paraphrenitis, true pleuriſy, peripneumony, the Dutch quartan, hepatitis, and ſome ſorts of hectic, we take away blood with a cruſt upon the ſurface, of greater or leſs thickneſs, whiteneſs, glaſſineſs, or yellowneſs: and unleſs the bleeding has been too long delayed, we find, in moſt of theſe diſorders, the under part of the craſſamentum adhering ſo ſtrongly or conſiſtently to the cruſt, that you cannot ſhake it off, though you lift it on the point of a knife or fork. In the violent degrees of true inflammation you may ſtir the body of cruſt and craſſamentum for a minute in the ſerum, before it will tinge the latter with red.* In

* If this enquiry ſhould happen to fall into the hands of any gentleman who is fond of Horſes, the wealth and pride of Engliſhmen, I hope to be excuſed for repeating here what I have

In ſuch caſes, if you examine the blood after a ſecond or third bleeding, you will generally find the ſize or cruſt thinner, its colour more coccineous, or of a ſcarlet hue, the bottom part of the craſſamentum adhering leſs cloſely to the ſurface, and the ſerum not only in greater quantity, but more eaſily tinged by moving the craſſamentum in it. Nor will you fail to obſerve an alleviation of the ſymptoms in proportion to the change of appearances in the blood, the pulſe growing ſofter and ſlower, and the diſeaſe ending (that is, when matter is not already formed, as in a phthiſis pulmonalis, internal abſceſſes, and thoſe of the joints, where venæſection is merely a palliative) I ſay, ending with a thick water and perfect freedom from fever in a certain number of days, often on the critical ones marked with ſuch preciſion

have pointed out formerly under the title of Philo-Ippos, that high feeding, hurried exerciſe, and careleſsneſs of grooms, ſubject thoſe noble animals to the ſevereſt inflammations in their blood; that this appears very evidently by the ſize which is obſervable on the blood drawn from them; that when it is two inches, or even an inch and a half in thickneſs, one bleeding is never ſufficient to remove the fevers to which violent exerciſe particularly expoſes them; that in all caſes of epidemic catarrhs or colds, when there is ſuch an appearance, the drawing away a ſecond quart, or even that quantity a third time, will not only be ſafe, but becomes abſolutely requiſite for their preſervation, and is infinitely preferable to the hot drinks, Venice-treacle balls, and ſuch hodge-podges of farriers as I have ſeen kill forty or fifty horſes in a few days time, both in the cities of London and Weſtminſter, and in the country of England.

preciſion by the ancients, and ſo ſtrangely neglected by many, perhaps I might have ſaid by moſt, of the moderns.

In inflammations of the liver, the blood taken away has not only a buffy cruſt, but has the ſerum tinged with bile as well as the cruſt; with this difference, that the craſſamentum is ſeldom ſo denſe as in fevers purely and ſimply inflammatory, but requires the greateſt attention to its ſtate, as there is in the human body no viſcus in which the diſeaſe makes a more rapid progreſs. Such kind of blood I have frequently ſeen drawn from pregnant women of a coſtive habit and a jaundiced ſkin.

In women likewiſe about the ceaſing of their catamenia, the blood when taken away has the appearance before deſcribed: in both which caſes repeated bleedings are found neceſſary; but the laſt requires deobſtruent antiphlogiſtics inſtead of mere antiphlogiſtics, ſuch as ſal polychreſton, diureticum, or, in one word, the neutral ſalts. Indeed, without ſuch a treatment, the patients run the riſk of abſceſſes in the liver and other abdominal viſcera, which often prove fatal before any indication appears to warrant an artificial diſcharge, even where it is practicable.

In the laſt months of pregnancy I have even ſeen five or ſix bleedings neceſſary, till the pulſe has been at laſt reduced under fifty in a minute, and the patient relieved with an efficacy that has ſurpriſed

priſed the attendants. When the blood is of a thick conſiſtence, and the inflammation is conſiderable, frequent bleedings are neceſſary.*

The ancients ſometimes ordered bleeding very late in the diſeaſe. Hippocrates did ſo in the caſe of Anaxion of Abdera on the eighth day. The operation has at leaſt this good effect, that it ſlackens the fever where it has been performed too late to prevent internal ſuppurations.

The difficulty of preventing abſceſſes in the thorax, where a certain number of days have run on with much fever, is a reaſon why repeated bleedings ſhould take place as ſoon as the indications are evident: the ſtrength and the danger will aſcertain the quantity, and the diſtances between the blood-lettings.

On the blood of plethoric habits that have fallen into, or become infected with, putrid fevers, there is a cruſt which has a greeniſh hue, and ſo pellucid that the reſt of the craſſamentum may be ſeen through it. This appearance ought to put the phyſician ſtill more on his guard, as one bleeding too much in ſuch a ſtate, where the under part is gory, may, and often does, prove fatal.

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* In the pregnant ſtate the quantity of blood drawn away ſhould not in general exceed five or ſix ounces at one time, as the moſt accurate obſervers have found bad effects to follow too copious bleedings by the lancet.

SECTION XVIII.

THE HARD AND EQUAL PULSE.

ALTHOUGH it be very true, that many circumſtances in the age, ſex, conſtitution, affections of the mind, and ſize of the artery itſelf, affect the pulſe; it is yet equally certain, that the doctrine of Pulſes has a very principal ſhare in the diagnoſtic art: nor is there any ſort of pulſes more worthy of our attention than thoſe which are Hard and Equal; for the hard one, if equal at the ſame time, plainly indicates an inflammatory ſtate of the juices, a fullneſs of the veſſels, obſtructions from ſizy blood in the capillary arteries, and in general a denſe ſtate of the blood, accompanying almoſt every inflammatory fever.

By a Hard pulſe I mean, when the artery ſeems, on being felt, to contain a wire or ſolid ſubſtance within it; of all others, the ſort of pulſe which is leaſt apt to miſlead. It almoſt always indicates a reduction of the ſtrength. In rheumatic and other inflammatory fevers, where no particular viſcus is affected, I have examined the pulſe by the watch two or three times a day, for ſeven, fourteen, ſeventeen, twenty-one, or even more days together, without finding it vary three ſtrokes in a minute, not even at noon and midnight, when ſenſible alterations have been ſaid to be obſervable in the pulſe; nor am I acquainted with any ſymptom more

more certainly indicatory of the exiſtence of an inflammatory fever, than the uniform hardneſs and equality along with quickneſs of the pulſe: and yet it never muſt be forgotten, that where the lungs or inteſtines are obſtructed by ſizy blood, or real inflammation, you cannot judge of the degree of either by feeling the pulſe alone; for in the inflammation of thoſe viſcera, and in the phrenitis after the diſeaſe has gone on for ſome time, but eſpecially when the cerebellum has become affected, the pulſe is not found to mark ſufficiently either the ſtate of blood, or the quantity of diſeaſe or danger: nor can I doubt, but that the worſt conſequences have often ariſen from the ſtate of the pulſe's having miſled the practitioner in the above-mentioned inflammatory fevers. A thorough knowledge of the nature of ſizy blood, and of the conſequences which follow its not being drawn away in ſufficient quantity in ſuch caſes, ſaves or deſtroys the patient. There is another miſtake, and no uncommon one, attending ſuch a ſtate of the blood, that many phyſicians, even ſkilful and reputable men, riſk their patient's life to ſave their own reputation, by not exceeding a given number of bleedings, becauſe the vulgar conſider four or five as the utmoſt length to which bleeding ought to be carried, even in the moſt preſſing circumſtances. I believe I ſhall be ſeconded by the beſt judges, in aſſerting that very many caſes occur where double the number of bleedings are not too much, and for which

I never had ſo good a rule to proceed upon as the craſis of the blood's not being diſſolved by the former bleedings, and the pulſe's not beginning to ſhake or grow unequal. From an obſervable inequality's taking place, I have learned not only that the inflammation is giving way, but that no more blood ſhould be taken. I ſpeak of a change from a ſynchroniſm or equality in the pulſe.

SECTION XIX.

THE FIXED PAIN.

IMMEDIATELY after the ſhivering fit, and ſometimes even before it, when the fever is of the inflammatory kind, a Fixed Pain ſeizes ſome particular part. If the inflammation is ſeizing the brain, it is of the pulſatory ſort, like the ſtroke of a hammer; ſo that a lying poſture is next to intolerable. If the ſide is affected, or the organs of reſpiration, the pain is ſo cutting as to render a free or full drawing of the breath impracticable. If the ſtomach or bowels are attacked with inflammation, it is equally inſupportable. Where the limbs are attacked, as in the rheumatic fever, the pain reſembles the gnawing of dogs, which continues in a greater or leſs degree while the fever laſts.

SECTION XX.

THE COLOUR OF THE TONGUE.

IN a common inflammatory fever, the whole ſurface of the Tongue appears to be covered with a kind of muſlin more or leſs thick according to the degree of inflammation. Blood-letting and diluents gradually diminiſh that appearance, and the natural pale red returns in proportion as the juices circulate with more freedom, and the criſis of the water takes place, which, if you except a few conſtitutions, never fails to happen in the inflammatory fevers of this climate. In pulmonic diſeaſes I have ſeen on the back part of the tongue a black ſoft fur, which laſted two or three weeks after the violence of the diſeaſe, and the danger of ſuppuration, had ceaſed: but as I knew that thoſe patients had naturally a vitiated lymph, and required a well-regulated diet to reſtore them to perfect health, I gave them to underſtand, that till this appearance ceaſed they were not to think themſelves in a ſtate of ſafety.

SECTION XXI.

THE MARKS OF COCTION IN THE URINE.

SUCH was the inimitable ſkill of the Great Hippocrates in propheſying the events of diſeaſes, that it was not a wonder he ſhould, in the

times of Polytheiſm, be ranked among their divinities; for he ſeems to have poſſeſſed ſo perfect a knowledge of the courſe of them, as to be able to foretell the very days of their change as well as their iſſue.

I have never been able to diſcover any thing in his works, or in the writings of thoſe who have followed his ſteps, that holds more univerſally true than the obſervations they have left us about the Urine in fevers of the inflammatory kind. And I am bold to affirm, that I have ſeen the progreſs, ſafety, and event of fevers marked by the urine with the utmoſt regularity, where they were not diſturbed by meddling too much with Nature's operations for the cure; notwithſtanding we have been told very lately, that "it is but in very few "maladies where the blood, and we might add, "the urine," ſays the writer, "affords a practi-"tioner much uſeful information." To ſuch a pitch of ſcepticiſm are we arrived! From what ſhall we take our indications of cure, or our knowledge of diſeaſes, by-and-by? It concerns me very little, whether all the critical matter be carried off with the urine, provided it gives me rules to judge of the quantity, crudity, or the degree of Coction, and enables me to foretell, whether the diſeaſe is likely to be dangerous or ſafe, to prove of ſhort or long duration, and when the patient may quit

quit a medicated regimen for his uſual modes of life. †

It ſuits my purpoſe to make the following remark in this place, That, excepting in two inſtances, I have never ſeen any caſe where the patient did not make thick water, ſooner or later, before you could ſay that he had recovered his former ſtate of health. It has been aſſerted by Dr. Hillary, in his Account of the Diſeaſes of Barbadoes, that ſome fevers there, even of the intermitting kind, never ſhow any ſediment in the water. I know very well, that there are diſeaſes of the putrid ſort, deſervedly called ἄκριτοι, where the days of the criſis cannot be aſcertained by any ſingle appearance, where the patient muſt have had air and exerciſe before he can make ſuch; and, I muſt add, particularly exerciſe on horſeback, as nothing we know ſo certainly produces it, or ſo certainly continues to produce it, until the conſtitution has diſengaged the dregs (if I may uſe ſo antiquated an expreſſion) of the feveriſh fermentation.

The particular days of making it have been nearly aſcertained. Indications of a complete ſediment and perfect criſis on the ſeventh, ſhall be

 ſeen

† There are phyſiologiſts who maintain, that there is no ſuch thing as coction or criſis, becauſe people die where there is no materies morbi: "for," ſay they, "fear, joy, ſtrong "paſſions, or violent cold, produce death." But there is ſophiſtry in this argument; for we daily ſee the criſis concomitant with thick water, or looſe ſtools, or a plentiful ſweat, or all theſe together.

ſeen on the third, and again on the fifth. There are now, in this town, many living witneſſes of my having prognoſticated the times when ſuch was to be made, and the day of the criſis. The ſeventh day has been, and continues to be, the moſt common for the termination of many inflammatory fevers. See the Aphoriſms of Hippocrates, B. iv. Aph. 71. his Coacæ Prænot. i. No. 213. Galen had, in one ſeaſon, four hundred patients in acute fevers, who obtained a criſis on the ſeventh or ninth day. Galen de Diebus Decretor. L. ii. v. vii. x. Dr. Sydenham found many fevers ending regularly on the fourteenth day; Baglivi obſerved the ſame thing; and both in caſes that were not diſturbed by the officious application of remedies, by which they acknowledge that fevers were lengthened out.

Another rule, from which I have not found it ſafe to vary, has been, that no favourable appearance in a fever, even though it was merely a depuratory one, (ſee Sydenham) and where the vehemence and bad tendency of the ſymptoms had been removed by bleeding and an antiphlogiſtic regimen, could ever prevail on me, when I had the ſole direction, (and I had the ſole direction in an hoſpital for nineteen years, where ſuch fevers were very common) to admit of any irregularities in the patient, until the time arrived when the ſediment in the water had made its appearance, and ſet both my patient and myſelf at large as to his indulgence in living.

It

It is but juſt to add, that the coldneſs of our climate, as has been remarked long ago, and the great irregularities in diet, or ſtill greater in practice, produce putrid fevers without marks of criſis that can be foretold in the urine, and diſeaſes whoſe periods and duration phyſicians cannot aſcertain.

Where the diſeaſe is of the inflammatory kind, the ſigns of a beginning concoction are very often evident: where that is accompliſhed, the critical diſturbance appears, and the critical evacuation follows, which, if perfect, leaves the patient in a tolerably eaſy ſtate; but if imperfect, either he is not entirely free of the fever, or he continues in danger of a relapſe. See Martin's Eſſays on the Periods and Criſes of Fevers.

Though it appears from the obſervations of all the beſt writers, both ancient and modern, that the ſolution of the fever does not depend upon what is thrown off by the urine, ſtill we are very often enabled by it to judge of the nature, duration, and iſſue, of the diſeaſe.

CHAPTER III.

CHAPTER III.

SECTION I.

OF THE CURE OF FEVERS IN GENERAL.

IT appears from the oldeſt records of the Greek phyſicians, that they conſidered a Fever as a purging of the humours, and a ſeparation of the impure blood from what was pure; that being thus the inſtrument which Nature made uſe of to remove from the body whatever impeded its operations, the phyſician, who was only Nature's miniſter, was called in to aid, not to oppoſe or depreſs her efforts; that he of courſe was the moſt able practitioner, who cheriſhed a fever to its juſt height, and preſerved it in that equilibrium which enabled the conſtitution to throw off the diſeaſe; that he on the other hand greatly erred, who attempted to put an end to it before it had accompliſhed its work; in ſhort, that fevers were not in themſelves ſuch formidable things, ſince, if properly treated, they ſerved to prolong life, inſtead of ſhortening it. Thus thoſe maſters of the profeſſion found, that a Fever cured the apoplexy; a Quartan, diſeaſes of

the nerves, as palſies and epilepſies; a Tertian, many diſeaſes; and a Continual fever, moſt. In one word, they looked on a fever not as a foe, but as an auxiliary, which, by diſſolving, ſtirring, and mixing many ſtagnated humours, that ſeemed to produce a ſtruggle between life and the diſeaſe, brought them to what they called a Criſis: if, on the contrary, the fever ceaſed before it had performed its office, whether owing to the miſconduct of the phyſician, or to the failure of nature, (i. e. of the whole powers of the body excited) the patient was not cured. But the ancient phyſicians obſerving, that in many caſes Nature's exertions were ſo violent as to be productive of pernicious conſequences, they learned to reſtrain her by ſuch means as ſhe pointed out, ſuch as venæſection inſtead of hæmorrhages, or by purgings when they ſaw her loaded with too much of the morbid matter.

They found her deciding ſpeedily in Ardent fevers, but ſtruggling longer in Slow ones. They obſerved, that evacuations had a large ſhare in the natural cure of fevers. They diſcovered, that the various deviations of the fluids from their natural ſtate brought on fevers entirely diſtinct from each other, according to their different cauſes, and requiring, like plants or animals, certain ſpaces of time to bring them to maturity; that one ended by an hæmorrhage, another by a flux, another by a ſweat, a fourth by thick water on particular days, and all theſe in proportion to the circumſtances.

They

They likewiſe remarked, that there were medicines which appeared calculated for carrying off one ſort of humour rather than another, and to unload the body of that weight which maintained the diſeaſe. Before their obſervations had led them to ſuch diſcoveries, they reſted the cure chiefly upon a well-regulated diet, which for ſimplicity and efficacy has not been exceeded ſince. Chymiſtry has, no doubt, done much towards introducing a more perfect knowledge of the nature of thoſe agents we employ for the cure of fevers and other diſeaſes: but then its abuſe has introduced a wildneſs of theory, and an inconſiſtency of practice, that, I had almoſt ſaid, counterbalance its uſe.

When there is reaſon to fear the approach of bad health, the beſt medicines are reſt, abſtinence, and watery drinks. By ſuch, even violent diſeaſes, when at hand, may be diſperſed. See Galen's third book.

Many are deceived in hoping to remove the languor in the beginning of fevers by exerciſe, the warm bath, vomits, forced ſtools, ſweating, and wine, becauſe theſe anſwer SOMETIMES; but abſtinence will NEVER diſappoint: ſo ſaid Galen.

The preſervation of the ſtrength, the correction and expulſion of the ſtimulating acrimony, the diſſolution and expulſion of the glutinous lentor, and a mitigation of the ſymptoms, are the four chief requiſites for the General Cure of Fevers. Some of the ancient phyſicians recommended a faſt for

for the firſt three days. Aſclepiades was of opinion, that the ſick ought to be weakened by light, by watching, and by intenſe thirſt; not even allowing the mouth to be moiſtened in the diatriton. Galen called ſuch νοσηματα χειροποιητα, and with great juſtice condemned them.

Had he lived in theſe times, he would have had ſtill more reaſon to call diſeaſes by that name, though upon very different accounts; indeed the very oppoſite, too much meat and too much drink.

Feveriſh heat is taken off by bleeding, muſcular reſt, tepid watery drinks acidulated with lemon, currant jelly, Hippocrates's ſimple oxymel, cooling the bed-chamber, opening the bed-curtains, removing thick bed-clothes, and avoiding all ſtimulating and ſtyptic medicines. Vomiting, from a Bilious cauſe, is cured by ſubacid drinks; and from a Putrid cauſe, by cream of tartar in water-gruel, currant jelly, ſorrel, and ſuch like.

As the doctrine of Criſes, eſtabliſhed by all the beſt writers in phyſic, both ancient and modern, is now neglected in general, if not almoſt forgotten, or its truth barely allowed, it becomes proper that the ſtudents and doctors of phyſic ſhould be awakened to a cloſe attention to the duration of fevers; for, unleſs phyſicians mark out to themſelves, and to the friends of their patients, the neceſſity of the diſeaſe's going on to Coction, and the time required for fulfilling its career, they can never give ſatisfaction, nor prevent running after

ideal

ideal plans of an immediate cure and ſuppoſed ſpecifics. That the writer of theſe ſheets may not be wanting, on this ſubject, to the cauſe of his profeſſion and the conviction of his mind, he is willing to reſt his reputation upon the aſſertion, that unleſs in the very beginning, or when fevers form themſelves under that particular type which comes within the power of the Bark, they cannot be removed by any other known medicine until they have meaſured out a certain ſpace; that a Pleuriſy, for example, requires five, ſeven, or fourteen days to attain a complete criſis; a Rheumatic fever, fourteen or twenty-one; a Hectic, many more, where no ulceration has taken place in the lungs; a Putrid fever, often ſtill more, perhaps twenty-one, thirty, or even forty: therefore the grand queſtion in the cure of fevers ſeems to be, When the cooling or antiphlogiſtic, and when the antiſeptic, ſtimulating, or cordial methods are to be practiſed; or, where the fever happens to be of a Mixed nature, (which is frequently the caſe) whether the cooling or the warming treatment is neceſſary, and at what time of the diſeaſe the phyſician is to give up the one, or adopt the other?

It ſhould be remembered, that there are days which, becauſe they determine the duration of the fevers of one particular ſort, have been called the Critical days. Theſe were by the ancient profeſſors obſerved to hold very regularly in inflammatory fevers; and they continue to do ſo ſtill, in a greater

or leſs degree, even where the management has been faulty.

Let it be added, that we ſeldom find a reſolution of any inflammatory fever without the ſigns of coction in the urine.

From all theſe circumſtances it appears, that the crudities of our juices require, according to their cauſes, a limited time to digeſt them. As the effects of obſtructed bile or checked perſpiration are ſeen in the urine, it is not to be doubted, but that the other ſecretions being obſtructed, and the groſſer parts regorging into the maſs of blood, ſupplies the urine with materials which will ſubſide when the fever ceaſes, and which, by digeſting under the action of the body, (whether of its fibres, or veſſels, matters not) will, with the aſſiſtance of proper ſaponaceous drinks, reſolve at laſt, and bring on an agreeable criſis.

It is of much importance to follow the indications given by Nature in the beginning of fevers, either for bleeding, or for purging; ſince by delays the diſeaſe becomes more violent, and the putrefaction increaſes as the ſtrength diminiſhes, ſo as neither to ſuſtain longer the force of the ſtruggle, nor admit the uſe of powerful medicines for the cure.

Fevers that are accompanied with bad ſymptoms, and continually growing worſe, have been conſidered as Malignant, and are, for the moſt part, commonly treated with ſpiceries, alexipharmacs, volatiles, and all the hot medicines that can be thought of.

By

By this conduct thoſe very difficulties are brought on, which are wiſhed to be prevented.

Where the air, ſeaſon, ſituation, and manner of living, produce a quantity of crude and depraved juices, there ſuch fevers are moſt frequent.

For the duration of thoſe Slow fevers which are long protracted, and which often have no criſis, it will not be eaſy to give a better account, than that the veins continue to be ſupplied from loaded viſcera and inteſtines. Thus we have ſeen Exanthematous and Miliary fevers go on for ſix weeks or more with a bound belly, becauſe they were treated as above, and the cure was truſted to a ſweating regimen, which might have ſome effect in clearing off what had already got into the blood-veſſels; but that was ſtill fed from the firſt paſſages.

Bleeding, and repeating it according to circumſtances, is the principal part of the cure in Inflammatory fevers; as purging after, or along with, proper correctors, is the point on which the cure of Putrid fevers chiefly turns. It is therefore of great importance to eſtabliſh plain and intelligible principles for determining when and how often the bleedings are to take place in the former, and what are the correctors and purging medicines that will ſooneſt alter and carry off the materials of the latter: for we have ſeen before, that, unleſs the corrupted juices be removed as ſpeedily as poſſible, the diſeaſe muſt grow worſe; and every man of experience knows, that this is often the work of

many

many days, and that it is only particular remedies which will anſwer ſuch purpoſes.

What theſe medicines are, will be ſhown in their proper places.

I know it will be aſked, for it has been already aſked, Have the beſt phyſicians then no controul over fevers in ſhortening their periods? To which I anſwer, Yes, if the diſeaſe is of a nature to admit it, by the materials being looſe, and having an immediate outlet from the circulation by the bowels or the ſkin: for inſtance, in the Cholera Morbus, where the ſtomach and inteſtines throw off their contents with violence, the diſeaſe may have its duration ſhortened, becauſe the materials are looſe, and can be corrected during their evacuation by farinaceous drinks, chicken water, or what is preferable to either, ſubacid drinks, as lemonade, imperiale, &c.

It holds true likewiſe, that where a common Ephemera has been occaſioned by a wet coat, hurried exerciſe, or intemperate eating, a doſe of Dr. James's powder, of emetic tartar and manna, or perhaps a copious dilution of the contents of the ſtomach and of the blood, will prove a cure.

But it does not hold in fevers either Putrid or Inflammatory, where the diſeaſe has ſet in with a hot and cold fit, and the other characters of theſe fevers which were before delineated.

The common proverb ſays, It is the phyſician's buſineſs to cure ſpeedily and pleaſantly. The ableſt among

among them have been reproached for ſeeming mere ſpectators, or at beſt pilots, inſtead of putting an end to the fever by ſome ſpecific medicine, or ſelecting it from the body as a magnet does iron from the mixed duſt of metals. It will be ſeen afterwards, that we are not in poſſeſſion of any ſuch medicine; but I truſt it will likewiſe be ſeen, that we have it in our power to correct the deadly poiſon, and carry it off gradually, in Putrid fevers, as well as to controul the vehemence of the circulation, and prevent the danger from ſizy blood's falling on the vital parts, in Inflammatory ones, until the diſeaſe has waſted itſelf and run its courſe.

If in what is to follow we can be ſo happy as to lay down any Rules for effectually accompliſhing theſe purpoſes, it is all we can pretend to, and indeed the utmoſt height of our ambition.

SECTION II.

BY BLOOD-LETTING.

IT is remarkable, that all the ſick, whoſe caſes are recorded in the firſt and third books of Hippocrates's Epidemics as recovered, were reſtored by excretions of the humours from one or more avenues of the body; and that, of thoſe who died, they held out longeſt (if you compare them with ſuch as had no evacuation) whoſe juices were thrown off in the largeſt quantities: from whence

Hippocrates

Hippocrates was probably led to believe, that the cure in thoſe caſes ſhould conſiſt chiefly in attempting by art the ſame ſort of evacuation by which he obſerved Nature relieving herſelf. Accordingly he found, that the bad ſymptoms of very acute fevers were taken off ſuddenly, and with ſurpriſing ſucceſs, by large bleedings: and it is apparent, that his directions about Blood-letting in inflammatory fevers are given with peculiar preciſion, though we know not what lights he poſſeſſed concerning the nature and qualities of the blood. In his book de Victûs ratione in morbis Acutis, and on the ſubject of Pleuriſy, he ſays, indeed, "that "the blood ſhould be drawn away till it changes "its colour to red and livid." Of this however we are certain, that he was not acquainted with the circumſtance of the arteries and veins conveying the ſame ſpecies of fluid, though very much changed in its texture, as well as in its colour, by circulating through the lungs.

Aræteus Cappadox, who was in point of antiquity the next to Hippocrates among the Greek phyſicians, who flouriſhed in the time of Nero, and who probably practiſed not far from Rome, has improved on the lights furniſhed by the Founder of Phyſic, paying great attention to the pulſations of arteries, to the uſes that might be made of venæſection and arteriotomy, aſcertaining when the firſt and when the laſt was preferable, from what part of the body blood was to be taken away with

with moſt advantage, and in what quantity according to the urgency of the ſymptoms, and alſo with what caution, and at what intervals. Celſus, who flouriſhed in the days of Auguſtus and Tiberius, gave the following direction about blood-letting: "You muſt attend to the colour and quality of "the blood while it is flowing; for if it be thick "and black, it is vitiated, and flows off with ad-"vantage; but if it be red and bright, it is in a "healthy ſtate, the loſs of it is hurtful, and it ſhould "be inſtantly ſtopped." The rule is too general; but it probably led mankind afterwards to a more particular enquiry into this ſubject.

In latter ages many diſputes have ariſen among phyſicians about the good and bad effects of blood-letting. Among the Arabians, Rhazes, who lived in the tenth century, let blood in the ſmall-pox and meaſles: but many of that ſchool were ſo much afraid of it, that they were called Αιμοφοβοι. Avicenna diſapproved of bleeding in bilious fevers, quia bilem refrænabat ſanguis.

Baptiſta Suzius, in 1628, wrote againſt the prejudices of the Arabian ſchool, but was himſelf as much, if not more to blame, for praiſing venæ-ſection in all fevers continued and putrid, as well as in plethora and inflammation, when the diſeaſe was crude, and before coction.

Nicholaus Maſſa, about the middle of the ſixteenth century, wrote a book on the effects of blood-

letting in fevers which ariſe from what they call a Putrefaction of the Humours.

SECTION III.

BY VOMITING.

AS the beſt effects have in all ages been obſerved to be produced, in a variety of caſes, by natural efforts of Vomiting, art has learned to imitate them with ſucceſs. If the bile is poured into the ſtomach, an intelligent obſerver enquires, what anxieties, heat, and weakneſs, have enſued. So long as the bile is retained unconcocted or uncorrected, neither the pain nor the fever can be removed; but when the body is in proper time freed from the bile, whether naturally or by art, the pain and fever vaniſh of courſe.

Whatever has gone down by the œſophagus, that can neither tranſude the coats of the ſtomach, or aſcend into it by the pylorus, may be thrown up by vomits; and therefore all thoſe viſcera which empty themſelves into the inteſtines, viz. the liver, ſpleen and pancreas, and alſo the gaſtric, epiploic arteries, &c. which empty themſelves into the liver by the vena portarum, can be purged of their contents by vomits.

It has been uſually regarded as a rule, that vomiting is to be cured by vomits: but this is not univerſally true; for where vomiting ariſes from inflammation,

inflammation, it would be the worſt of remedies, as bleeding would prove the beſt. The ſame obſervation holds good, if it aroſe from cancer or ſchirrhus.

Doctor Sydenham, Boerhaave, and others, obſerved, that autumnal fevers, proceeding from collections of putrid humours in the ſtomach, or from ſummer heat, may, by being carried off by vomits, prevent the aphthæ, teneſmus, and fatal diarrhœas, from happening ſo frequently in the end of ſuch fevers.

SECTION IV.

BY PURGING.

THE ancient phyſicians having obſerved, that fevers were often ſpeedily and completely cured by fits of looſeneſs, they attempted, in imitation of Nature's procedure, to cure by giving Purging Medicines; but ſtill with very great caution: for they perceived that the ſame purgative had not always the ſame effect; that ſometimes it purged too much; and that ſometimes it brought away what it was not wont to do. They always enquired beforehand, whether their ſick had taken purges, and with what effect; whether thoſe purges operated ſlowly or briſkly; and they gave gentle or ſtrong purgatives in proportion, being very careful not to exhibit any raſhly. They likewiſe remarked,

that great eaters were often purged as if they had taken phyſic; that ſome foods proved phyſic; but that habit cauſed their tendency to be overlooked till the patient was frequently diſturbed, or diſeaſes were brought on; and that, if purging medicines were given in ſtrong fevers before the diſeaſe remitted, or till towards the end of it, the heat was increaſed, the purging effect did not take place, or perhaps a jaundice was produced, or ſuch a loathing of every thing as ended in death. For theſe reaſons they were afraid of purging ſtrongly in fevers, eſpecially during the dog-days, giving inſtead of it glyſters, which they found always ſafe, where they found them neceſſary. The Parent of Medicine had obſerved all this, and was beſides particularly attentive to the nature of the diſeaſe, that he might find out whether one ſort of humour was to be carried off or another, as the one or the other appeared to be in fault. Hence the different names of Phlegmagogue, Hydragogue, Cholagogue, Melanogogue, as pituite, water, gall, or black gall, was carried off. He believed at the ſame time, that the medicine was not without effect on the other humours; and where this attention was paid, or omitted, the cure ſucceeded, or otherwiſe. On the whole it was believed, that certain determined humours were acted on by particular purges. Such were the ideas of elective attraction, entertained by the ancient phyſicians! Nevertheleſs, there were thoſe among them who ſuppoſed the whole

whole effect of a purge to be altering the nature, by leſſening the quantity of the blood, and who renounced the notion of ſpecific purges; alledging, that gentler means than thoſe made uſe of by Hippocrates to purge phlegm or water, bile or black bile, would anſwer all the ends propoſed. Their notions on this ſubject gave Galen great offence, as they interfered with his favourite plan, and provoked him to appeal to common experience, as well as to his known practice at Rome, (if Hippocrates had no weight with them) and to challenge them to cure a jaundice by an indiſcriminate purge, with the ſame ſucceſs that he could by a ſpecific one; or to cure a dropſy by bleeding, which diminiſhed the quantity of the blood, inſtead of curing by a hydragogue. This diverſity of opinions among the old phyſicians has occaſioned much diſpute among the modern: the anatomiſts Malpighi, De Graaf, Pechlin, Borelli, Willis, and likewiſe the phyſiologiſts, have taken different ſides, as their theories or obſervations led them.—See Martin's Eſſays.

If the effects of medicines were confined to the ſtomach or bowels, much might be ſaid for the ſupport of both opinions: but there are ſo many proofs of their entering the maſs of blood, no leſs than all the viſcera, that it were unreaſonable to confine ourſelves to any particular ſyſtem on this ſubject, eſpecially when we ſee the effects of rhubarb on the colour and ſmell of the urine in a few

minutes after it has been ſwallowed, of turpentine or aſparagus on the urine, of cantharides upon the urinary paſſages and the pulſe; and alſo the powers of the abſorbent veſſels in the firſt paſſages, ſo viſibly affecting the ſtrength and ſpirits the moment wine or broth has been ſwallowed by a perſon exhauſted with fatigue. What then ſhould hinder purging medicines from working on the blood, or ſecretory organs of the liver, pancreas, &c. ſo as to procure extraordinary diſcharges from the blood, by diſpoſing the veſſels to throw off ſuch noxious humours as want to be expelled, and to reſtore the body to its healthy ſtate, by ſtriking at the root of moſt putrid and ſome inflammatory diſeaſes? The fact is, that we find there are medicines, which, by a kind of elective attraction, are capable of diſpoſing the blood to ſecrete particular humours, and the bowels to diſcharge them. It is indeed true, that a great phyſiologiſt treats as a mere fancy the opinion of thoſe who think there ſubſiſts, in the ſtomach or pancreas, liver or meſentery, &c. a maſs of feveriſh matter called Fomes; and from whence is poured into the blood, either continually, or at ſtated intervals, a cloggy ferment which occaſions a continual or intermittent fever: and he aſks, Why, notwithſtanding repeated purges, vomits, diluting broths, which overturn completely the firſt paſſages, the gall and pancreatic juice, it yet happens that agues become more obſtinate? for

for which he quotes Dr. Sydenham's authority.*

To this I anſwer, that neither this eminent Frenchman, nor our Engliſh Luminary, had at that time diſcovered medicines which are found to ſucceed in our practice. The knowledge of what theſe are, has been owing partly to accident, and partly to chymiſtry, which, by teaching us the nature of bodies, and the method of analyſing them into their firſt principles or component parts, have enabled us to judge of the effects requiſite to be produced on the humours of the body. There is not a more common ſymptom in putrid fevers than a looſeneſs. The debility and oppreſſion which attend it, the irregularity and quickneſs of the pulſe, the intervals of freedom from pain in the bowels, the fœtor of what is diſcharged, all mark its nature, and diſtinguiſh it eaſily from the bloody flux or the inflammatory dyſentery. I muſt add, that there is in general nothing leſs underſtood than the proper management of the diarrhœa which attends putrid fevers, nor any ſituation where more miſchief is done by checking the looſeneſs, or more errors committed in the mode of doing it.

We all know, that the whole ſyſtem of veins and arteries may be emptied in a very ſhort time by the inteſtines, the biliary duct, or by the meſenteric arteries; and that the materials of fevers depoſited

* Sauvage's Noſolog. Methodic. Claſſ. ii. Gen. & Sp. Morbor. p. 211.

in the maſs of blood, as well as in the inteſtinal canal, may be carried off by the bowels. Of this we have ſufficient proofs in the ſpeedy cure of the cholera morbus, eſpecially if acidulated drinks are uſed; in the happy effects of ripe fruits given in moderation, particularly of grapes in the bilious flux of armies; and the wonderful power of mineral acids mixed with opiates in this laſt mentioned diſeaſe.*

I cannot allow ſo favourable an opportunity to paſs, without taking notice of what is done every day in fevers in this town.

We have all obſerved the tendency to a looſeneſs in ſome fevers, not only in the beginning of them, but even after vomits have been given (our modes of living, particularly in London, make bilious or putrid fevers more common than in Dr. Sydenham's days). In theſe fevers, whenever any part of the inteſtinal canal is loaded with acrimony, the pulſe is very quick, irregular, and often unequal: the ſpirits are often depreſſed from the ſame cauſe, eſpecially while the bile is running off by ſtool.

A notion very generally prevails, that the ſtrength is exhauſted in proportion to the number of ſtools: but the direct contrary is true; for in putrid diſeaſes whatever is putrid, as we have before remarked, is moſt naturally and readily conveyed off by the inteſtinal canal. What ſolicitude have we not ſeen, even amongſt medical men, leſt the

* See Storck's Ann. Medic.

the ſtrength ſhould be exhauſted in proportion to the number of ſtools! and yet how much miſchief have we found to ariſe from checking the looſeneſs! More fever, a quicker pulſe, greater depreſſion, more delirium, and a longer diſeaſe. Who, that has been in an extenſive practice, is ignorant how many days muſt be run through for correcting and letting looſe the putrid materials; and how many ſtools muſt be procured, by antiſeptic correctors and purging medicines, in fevers of twenty or thirty days duration (frequently above a hundred) to diſcharge from the habit what quickened the pulſe to a dangerous velocity, and kept the body in a ſtate of great debility, the limbs in tremors, and the brain in an unceaſing reverie, till the body, like another ſalamander, riſes with freſh vigour out of that very fire which threatened to deſtroy it?

SECTION V.

BY FEBRIFUGE MEDICINES IN GENERAL.

IT does not appear, that the oldeſt of the Greek phyſicians had adopted any ideas like ours, of Medicines which could put fevers to flight, and which we term Febrifuge. Their attention to the operations of Nature, and her modes of relieving herſelf, induced them rather to copy her, than preſume to ſhorten the proceſs, as modern phyſicians undertake to do: but they were incomparable

judges

judges how far bleeding, vomits, purges, &c. contributed to relieve. As to the foods and drinks which Nature craved, all theſe they applied with a ſkill that would have left us little to add, if their philoſophy or chymical knowledge had kept pace with their ſpirit of obſervation. In the days of Hippocrates and Aretæus, they had their barley-water and barley-cream, their hellebore, caſtor, and wine. Under the Roman empire, Celſus, Pliny, Galen, Cælius Aurelianus, and many others, whoſe opinions have been handed down to us by thoſe whoſe works have eſcaped the ravages of time, diſcovered peculiar virtues in particular drugs, and began to adapt them to the head, lungs, liver, ſtomach, or bowels, according to their different theories, or as different humours were ſuppoſed to prevail, or be in fault. Their Materia Medica was become conſiderable in the time of Galen, Dioſcorides, and Alexander Trallian. From all theſe laſt named many of our beſt medicines have been taken; but they ſtill continued to look for the criſes of diſeaſes, and were more employed to guide ſafely than to cure ſpeedily, knowing well that Nature could do the remainder.

Such was the ſtate of medicine before chymiſtry began to be cultivated at large; for, though it was of ancient date, it yet furniſhed but few preparations for the cure of diſeaſes, until the Europeans brought it, in the thirteenth century, from the Arabians,

Arabians, who had made a ſtudy of it for three hundred years.

Albertus Magnus, Roger Bacon, and others, applied it chiefly to alchymy, natural magic, and the mechanic arts; but Raymond Lully, towards the end of the thirteenth century, wrote on the univerſal medicine, quinteſſences, and on mercury.

About a century before the time of Paracelſus and Helmont, lived Baſil Valentine, a very expert chymiſt, who wrote the Currus Triumphalis Antimonii, commending its preparations for every purpoſe of medicine; an error, which, while it is regretted by ſome of our beſt chymical writers, is adopted by too many in this country.

Every one, who is in the leaſt degree acquainted with the hiſtory of chymiſtry, knows what changes were brought about in the practice of medicine by Paracelſus and Helmont, whoſe ſkill in the decompoſition of Nature's productions, and acquaintance with many of the elements of bodies, tempted men of ſpirit to ſhake off the fetters of Galenical and Arabian ſyſtems, which had ſo long enſlaved the ſchools of medicine: for they found they could not now have recourſe to powers which ſeemed not to depend on regular plans of bleeding, purging, &c. but which cured at once the leproſy and pox, while regular practice was diſgraced by it.

Theſe writers, and the chymiſts of that period, flattered by the diſcovery of ſuch powers, particularly in mercury, antimony, and diet drinks, began to look

look out for an univerſal medicine, which might extirpate all diſeaſes from the human body, reſtore perfect health, and maintain it to a very great age. Though this doctrine was diſcovered to be ill founded, and its abettors, notwithſtanding their boaſted poſſeſſion of an elixir againſt old age, died very early; yet it was not to be wondered, that mankind ſhould be flattered by ſuch an hypotheſis, while the old phyſicians were much diſconcerted to find all their ſtudies of the cauſes, ſymptoms, and treatment of diſeaſes, rendered entirely uſeleſs, if there indeed exiſted a Medicine which could be applied to every caſe and cure in all circumſtances.

At laſt the lovers of ſound philoſophy, towards the end of the ſixteenth, and beginning of the ſeventeenth century, applied to the ſtudy of medical chymiſtry, by which they were introduced to an acquaintance with the elements of bodies, and of courſe to the knowledge of various artificial as well as natural compoſitions, which they brought into the practice of medicine.

In many caſes they were enabled to judge, à priori, what changes might be thereby produced in the humours of the body; and no claſs more naturally became the object of chymical enquiries, than Saline ſubſtances, by which they underſtood in general ſuch as were ſoluble in water, and of a ſapid taſte when applied to the tongue. They divided Salts into Simple and Compound, and thoſe again into Acid and Alcaline; underſtanding, by the firſt, ſuch

as

as had a ſour taſte, and turned ſyrup of violets red; and by the laſt, what effervesced with the above acids, and turned ſyrup of violets green. Their alcaline were again divided into Volatile, which flew off in a vapour, and Fixed, which remained ſo in the fire. They learnt, that compound ſalts contained an acid, combined either with an alcaline ſalt, a metallic, or an earthy ſubſtance. When the acid was combined with an alcali, it produced a Neutral ſalt, that will not effervesce with either acids or alcalis.

Such obſervations incited them to examine with care thoſe ſalts in particular which had, time out of mind, been employed in preſerving animal ſubſtances from decay; I mean the different ſorts of ſea ſalt, ſal nitre, or ſal armoniac: and they applied their elements to different purpoſes, as they obſerved or reaſoned about their antiphlogiſtic and antiſeptic powers, till they had eſtabliſhed their utility, and taught us to look for ſovereign efficacy from their exhibition. Who, for inſtance, can now doubt of the ſpirit of ſea ſalt's poſſeſſing very conſiderable antiſeptic powers, that has ſeen its inſtantaneous effects in curing cankers in the mouth, ſtopping the progreſs of gangrene in the malignant ſore throat, and conquering the worſt ſymptoms of putrid fevers, given inwardly, and properly diluted? Who, that has ſeen alkaline ſalts ſtand the heat of a furnace undiſſolved, yet melt ſo readily with ſand into a glaſſy ſubſtance, which

again

again becomes almoſt impermeable to the moſt active menſtruums, can diſpute their energy? Who, that has ſeen gold, ſilver, and other metals, melt away in aqua regia, aqua fortis, and other ſolvents, can withhold his ſurprize? Who, that has obſerved ores give up their metals with ſuch good-will to the mixture of fluxes chiefly made of ſaline ſubſtances, can doubt of their penetrating nature and extenſive operation? Who, that has witneſſed the effects of alcaline ſalts, or ſoluble tartar, in diſſolving the moſt tenacious gums of myrrh and lac, can queſtion their force in diſſolving biliary concretions, vitreous humours, and the long liſt of ill-digeſted ſubſtances contained in our veſſels? No man, that has experienced the ſoothing and cooling effects of ſal nitre, when worn out with pain and thirſt, or Riverius's ſaline mixture, when heated by fever, or reſtleſs almoſt to deſpair, can ſufficiently admire that art which taught us to inveſtigate and combine ſuch powers. No man, that has felt fevers of the moſt depreſſing ſort, loading his ſhoulders, and ready to light on his already-aching head, removed in a few hours by ſal polychreſt and rhubarb, as if by miracle, but muſt be ſtruck with their effects. And who, that has tried in vain, by all the variety of ſudorifics, to moiſten the ſkin in the courſe of putrid fevers, till he applied to Mindererus's ſpirit, will heſitate a moment to acknowledge its diaphoretic and compoſing qualities?

Finally,

Finally, Who that has ſeen the powers of ſoluble tartar in procuring ſleep, and preventing or carrying off delirium in fevers of the worſt kind, or its efficacy in reſtoring ſo many poor wretches from idiotiſm, melancholy, and madneſs, to ſenſe, to hilarity, and reaſon, can forbear to bow his head with gratitude, firſt to Heaven, and then to chymiſtry, for teaching us to combine this heaven-ſent gift, and uſe it with ſo much ſucceſs?---N.B. I have ſeen twenty-five patients recovered entirely from madneſs by tartarus ſolubilis.---See a Pruſſian phyſician's account of its powers in caſes of madneſs, whoſe name I have forgot.

Having ſhown the wonderful virtues of ſaline ſubſtances in the cure of fevers, and believing it will be found in the following ſection, that we are in poſſeſſion of but few Specific febrifuges, I would earneſtly recommend it to all the lovers of the Healing Art to make themſelves intimately acquainted with the nature of eſſential and neutral ſalts, of the powers of acids and alcalis, of the qualities of tartar, and its various and excellent preparations, if they wiſh to correct, to change, or to evacuate, our diſeaſed humours, with ſatisfaction to themſelves, and utility to their ſick.

I am well aware, that ſome eminent phyſicians teach very different doctrines concerning neutral ſalts, and conſider their virtues as merely purgative, affecting the contents of the inteſtines only, and allowing them no merit, unleſs given in large doſes

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at the time of the acceſſion of fevers, or as ſedatives; condemning them as hurtful in putrid fevers, and aſſerting, that giving them too conſtantly may be hurtful, by prolonging the fever. I leave it with poſterity to determine which of us is in the right. Had they only maintained, that they increaſe hypochondriacal ſymptoms, or that they do not act as ſedatives in flatulent and nervous habits, I ſhould willingly have ſubſcribed to their opinion.

I muſt expreſs a wiſh on this ſubject, that thoſe gentlemen, who furniſh medicines for the ſick, would either take the trouble to prepare their neutral ſalts themſelves, or endeavour to become better judges of their being properly prepared by others, as the intereſts of the ſick in fevers are deeply connected therewith.

SECTION IV.

BY SPECIFIC FEBRIFUGES.

THAT Nature has, in her ſtore-houſe, Specific medicines which cure diſeaſes without our being able to account for the proceſs, is a truth which none can call in queſtion, while it is known that bark and mercury are ſo much uſed, and their inexplicable powers ſo well eſtabliſhed. It is to be obſerved, however, that ſuch knowledge has, with the aſſiſtance of a heated imagination, and an innate deſire of the people of this climate to remove evils

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in their embryo ſtate, made them flatter themſelves, and, what appears leſs excuſable, tempted phyſicians to join in the conceit, that fevers may be charmed away at the word of command, without having leave to run their natural courſe.

We know very well, that a fever fit, produced by more food or ſtrong drink taken in than the ſtomach can diſſolve into good chyle, may be cured immediately by a vomit, or ſtrong purge, becauſe it removes at once what would not obey the force of the digeſtive powers: but ſurely ſuch cannot deſerve the name of a Fever Powder.

We likewiſe know, that where the miſchief has been accumulated in the veins, whether it be ſizy blood, or has been collected by the habit from the inteſtines, and deſerves the name of Bile, or Putrid Fomes, our moſt famous noſtrum-mongers either apply their ſpecific with manifeſt diſadvantage to the patient, by increaſing his fever if from ſizy blood, or do not ſucceed in the cure till the habit in the natural courſe of the diſeaſe, or the medicine by its repeated efforts on the inteſtines, remove the cauſe by a bilious flux, or enable it to evaporate through the pores of the body. And this I maintain, that unleſs where the juices have by the ſeaſon, the age, or the diet, become ſufficiently fluxile, or the fever has put on an intermitting, or at leaſt a remitting appearance, neither the ſo much cried-up fever powder, nor the tartar emetic, nor the other noſtrums, of which antimony is the acknow-

ledged baſis, nor even the bark itſelf, can effect a cure: for I call not that a Specific Febrifuge, whoſe action is not evidently and ſpeedily diſcernable from the reduction of the pulſe, the diſpoſition to balmy ſleep, a craving for food, marks of coction in the urine if the fever be of the inflammatory ſort, and a clean tongue. It were, however, unfair not to acknowledge one advantage of antimonials, namely, the heart-felt ſickneſs generally attending their exhibition; whereby the patient is ſecured from taking down ſo much beef tea, chicken water, &c. &c. with which nurſes and others pamper their ſick, leſt they ſhould be ſtarved for hunger, at the very inſtant that Nature abhors ſuch cramming.

We ſhall afterwards ſee, and it is but juſt to ſhow, what are the real, and what the ſuppoſed, powers belonging to the claſs of ſpecific medicines, and firſt of the bark.

SECTION VII.

PERUVIAN BARK.

IT is a fact well known, that there never has been any medicine in ſuch general uſe, or which has been applied to ſuch a variety of purpoſes, as the Peruvian Bark.

Every year has brought to light new powers in this medicine: but it is equally true, that every day evinces the abuſe of thoſe powers; for, like a two-

two-edged ſword, it cuts on both ſides; and we cannot but regret that it ſhould be ſo wantonly employed by ſo many unſkilful hands. Let us examine its hiſtory from its firſt introduction into Europe, ſeparate matters of fact from idle hypotheſes reſpecting it, and endeavour to lay down a few maxims about its uſe, both general and particular; that we may, if poſſible, prevent in ſome degree the very great miſapplication of one of Heaven's moſt valuable gifts to mortal men.

The virtues of the Peruvian bark were firſt experienced in Europe about the beginning of the laſt century. Before the end of that, in the days of Sydenham and Morton, its powers of curing intermittents, and ſome remittents, were, by their ſkill, in a great meaſure aſcertained. In the beginning of this century we meet with accounts of its having been given for uterine complaints with ſucceſs. It was tried as a preſervative againſt diſeaſes at the ſame time; but was thought to produce a bloated look, and a melancholy habit, and alſo to prevent the growth of children.

About that period many learned men of Wratiſlau, Newcrantz, Sennertus, Rhodius, and others, hoped it might be tried with efficacy in malignant fevers, as well as in intermittents: but through ſome miſtake in the timing of the exhibition, or ſome miſmanagement in the doſe, by certain Engliſh phyſicians, Lower, Short, and others, its powers fell under ſuſpicion; and it was again laid

aſide till Francis Tortus publiſhed, in 1712, his valuable book on its virtues in curing pernicious fevers, &c. However, theſe very virtues were ſtill controverted by Ramazzini, Mangetus, and others, till conviction eſtabliſhed truth.

In 1755, its uſe in mortifications from an inward cauſe was diſcovered by Mr. Ruſhworth, of Northampton.

For malignant fevers of a particular ſort Carolus Richa recommended it, in 1720, in Conſtitutione Taurinenſi.

In 1731, it was recommended by Mr. Ruſhworth to the governors of the ſurgeons company, and tried with great efficacy, by the principal ſurgeons of London, in mortifications both with fever and without it.

Under the article of May, 1735, publiſhed in 1738, Dr. Huxham, of Plymouth, has the following remarkable paſſage: "I have at length "learned, that the milder aſtringent aromatics, "by ſtrengthening the craſis of the blood, and of "the vaſcular fibres, were the true alexiterials for "this diſeaſe, (a contagious fever raging at that "time in Plymouth) at leaſt towards the end of it; "and perhaps it might be its antidote: and for "that purpoſe, after the greateſt increaſe of the "diſeaſe, I gave a medicine of Peruvian bark with "fit alexipharmacs acidulated with Mynſicht's "elixir of vitriol, and did not expect in vain a "laudable ſediment, and even a lateritious one,

"as

" as it is called, eſpecially if I had obſerved the " ſmalleſt remiſſion in the diſeaſe." This obſervation is made with medical ſkill and ſingular preciſion. It were well if our preſent phyſicians looked on with as much temper and precaution, and acted with as much ſkill and acumen in the exhibition of this medicine. What a happy effect would it not have on the Bills of Mortality in London, where the bark is poured in as if it poſſeſſed an abſolute dominion over every fever, whether putrid or inflammatory, in every ſtate of the blood, with every appearance on the tongue, and at all times of the diſeaſe! What follows from the ſame writer deſerves the cloſeſt attention. " If then the " bark be powerful in a particular gangrene, why " not in an univerſal corruption of the humours, " where black exanthemata, (eruptions) vibices, " and the very quick putrefaction of the corpſes, " ſhow a gangrenous diatheſis of the blood?"

Dr. A. Monro gave it firſt for the bad ſmall-pox about the year 1740, from which time it has come into general uſe in that diſeaſe, in which however it is often abuſed. It was diſcovered, in a ſingle caſe, by Sir John Pringle, to be uſeful in malignant diſeaſes; and he afterwards gave it with ſucceſs in a great many.†

It is no unuſual practice, to give the bark with advantage in the whooping-cough of children; but

† Sir John Pringle on Army Diſeaſes, 4th Edit. p. 329.

there are caſes in which it will not ſucceed. Hear our very reſpectable author, lately quoted, on this ſubject.

"In January, 1744," ſays Dr. Huxham, "the "whooping-cough was epidemic. Bleeding never "was ſo neceſſary, even in the tendereſt children; "where it was not uncommon to meet with ſizy "blood. In theſe circumſtances the Peruvian "bark did not ſo happily ſucceed; which indeed "is perpetually the caſe, where the blood is very "thick and tenacious, or apt for inflammations. "Hence it is given in pleuriſies and peripneumo-"nies moſt iniquitouſly."

If there be inflammation in the habit, Peruvian bark is very improper, as it increaſes obſtruction; nor does it anſwer where any particular viſcus is obſtructed, or matter lodged. See Boerhaave's own Commentary. He ſays, in another place, "Wherever there are ſymptoms of true inflamma-"tion, I will not give the bark, nor ſimilar "medicines, unleſs I ſee the cauſe of it digeſted off: "for, if I ſhould give the bark ſooner, ſcirrhus "and the worſt obſtructions would ariſe; which "I have ſeen in an epidemic fever, where there was "inflammation about the liver, where thoſe who "took the bark grew pale, and on the leaſt preſſure "to go to ſtool had their liver burſt, and died."

"The bark will fail in a gangrene, if the veſſels "be too full, or the blood too thick; but "if the veſſels be relaxed, and the blood re-

"ſolved,

" ſolved, or diſpoſed to putrefaction, either from " a bad habit, or from the abſorption of putrid " matter, there the bark is ſpecific. With the " ſame caution are we to uſe it in wounds, viz. " chiefly in the caſes of abſorbed matter, where " it infects the humours, and brings on a hectic: " but when inflammatory ſymptoms prevail, the " ſame medicine, by increaſing the tenſion of the " fibres and ſizineſs of the blood, a ſtate very " different from the other, has ſuch conſequences " as well may be expected."---See Sir John Pringle's Appendix, 4th Edit. p. 30.

Had the ſame attention been continued to the time and propriety of exhibiting the bark, that was paid in Dr. Morton's days, or in Dr. Sydenham's, we might have been able to ſay with the former, " That we had given the Peruvian bark for " twenty-five years without having obſerved the " leaſt bad effect, excepting a dullneſs of hearing, " which laſted only during its uſe, and that we " never repented having given it; or to aver with the latter, that, " notwithſtanding either the vulgar " prejudices, or thoſe of a few better-taught men, " no miſchief had ariſen from it to the ſick, not " even a ſuſpicion of miſchief; unleſs that ſome- " times they fall into a ſcorbutic rheumatiſm by a " long-continued and repeated uſe of it."

Dr. Morton recommends it in the ſmall-pox and meaſles, towards the declination of the diſeaſe, that is, when the fever remains after the eruption of

the morbid poiſon, and begins to appear as a continual remittent. He alſo aſſerts, that deſperate phthiſes have been protracted for months and years by its uſe, ſo as to fit the patients for their uſual buſineſs, though not ſufficient for their perfect cure. But let it be remembered, that this powerful febrifuge was not given, in their days, for every diſeaſe, as in ours: not that we of this iſland are ſingular in the abuſe of it, foreigners having fallen into the ſame miſtake.

"The Peruvian bark," ſays Geoffroi, "deſerves "to be called the Antidote of Fevers, as it cures "all intermittent, remittent, continual, continent "fevers in both ſexes, and all ages, in infants, "boys and girls, middle and old age. In the caſe "of virgins, of pregnancy, and of lying-in, it "may be given moſt ſafely and moſt innocently." The very ſame Geoffroi aſſerts afterwards, "that "the bark is unable to drive away inflammatory, "putrid, malignant, and peſtilential fevers; and "that in ſuch circumſtances the phyſician's art "ought to lie in reducing the diſeaſe to ſuch a ſtate "as to be managed by an antidote for fevers." Had Mr. Geoffroi confined himſelf to this maxim alone, That the bark does not always extinguiſh peſtilential fevers, or thoſe of a malignant ſort, without great difficulty, but that, given with judgement, it ſpeedily and ſafely cures intermittent and remittent fevers, we ſhould have underſtood his opinions ſufficiently, without much minding his reaſonings.

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Were the uſe of the bark confined to intermittents, the miſchief might be more than counterbalanced by the good effects: but ſuch is the temper of Engliſhmen, that what is good in ſome caſes, is tried in all. Hence, with ſo powerful an inſtrument, ariſe innumerable evils; and to increaſe the misfortune, thoſe who add their mite to its acknowledged effects, talk ſo vaguely as to leave the deciſion to chance, which, with the bark, perhaps oftener than with any other medicine, is death or life to the patient.

From theſe obſervations on this medicine it appears, that in intermitting fevers, where the body has been properly prepared by vomits and aperient medicines, it ſcarcely ever does harm, unleſs where the continuance of the fever is neceſſary for purifying the body; that in remitting fevers it was found ſerviceable, by Morton and others, very early in this country, a proper attention being paid to the times of remiſſion and the mode of giving it, on which ſubject Morton and Torti ſhould be conſulted; that as the ſame cauſes, which produce remitting fevers, being exalted by a greater quantity of putrid ferment, produce fevers more putrid and more malignant, theſe require yet more the aſſiſtance of ſo powerful a febrifuge; that the marks of diſſolved and putrid blood, becoming more manifeſt by the number of putrid ſymptoms, call for its uſe even where the remiſſions are not marked by ſhiverings, ſweats, or ſediment in the water; and that the

the characteriſtics of malignity always call for its uſe, except where ſome peculiar ſign of its diſagreeing prevents going on with it [illegible] gue continues moiſt, or does not grow [illegible] x-hibition, it is a very good apology fo[illegible] its uſe, though at firſt it ſhould appear in[illegible] but where the ſkin grows dry, and the tongue more parched, I believe it never anſwers; and we ought to look out for ſome new indications to cure by ſome other means. In ſuch caſes, Mindererus's ſpirit with camphorated julep, vinegar-whey, wines or negus well acidulated, will be an excellent ſuccedaneum.

I have ſeen two or three malignant fevers, where the paroxyſm was only marked by anxiety and anguiſh about the precordia, where the bark ſaved as by the hand of God. Such was the caſe of the Hon. R——t D——d.

Sir John Pringle has given us an excellent general rule about it in a putrid diatheſis. "If the "veſſels are relaxed, and the blood reſolved, "or diſpoſed to putrefaction, either from a bad "habit, or from the abſorption of putrid matter, "there is the bark ſpecific."

We have ſeen on the contrary, that when inflammatory ſymptoms obtain, the ſame medicine, by increaſing the tenſion of the fibres, will always do more or leſs hurt; that where it has been found ſerviceable in rheumatic fevers, it has been towards the end of the diſeaſe, when the blood veſſels have been

been ſufficiently emptied, or the ſtate of the juices have been altered by the duration of the fever, or by the method of cure; that therefore in general, where the brain, lungs, liver, or any of the viſcera are inflamed, as well as where the general maſs of blood is ſizy, it is found to do much miſchief. But it is likewiſe true, that as its ſpecific powers will not always cure the intermitting claſs of fevers, ſo its tonic or antiſeptic will not take place in every inſtance.

Finally, we find it has been applied with extraordinary ſucceſs to a variety of purpoſes; and yet we ſee it has been attended with the ſame fatality which is ſo common to every thing poſſeſſing great qualities. If its too general uſe has not hurt its reputation, it has at leaſt interfered with its ſucceſs.

SECTION VIII.

ANTIMONY AND ITS PREPARATIONS.

IF in our opinions concerning the effects of Antimonial Medicines, and their powers over our frame, we were to be determined by the uſe made of them in theſe days, we ſhould be led to conclude, that all the writers on phyſic, from Hippocrates to this hour, whether phyſiologiſts, chymiſts, or phyſicians, had penned their works to amuſe and impoſe on mankind, rather than to inſtruct them: for, according to what we are now taught

taught to believe, Antimony in one ſhape or other, either by its preparations, which are known very generally, or in noſtrums, of which it is the acknowledged baſis, contains a power of curing fevers of every ſort, whether inflammatory or bilious, putrid or malignant, petechial or peſtilential, as well as ſlow and lymphatic ones, without reſpect to age or ſex, the time or quality of the diſeaſe. In it likewiſe is to be found the panacea for the gout and the cancer, or even, as a lively writer expreſſes it, a Cure for all Incurable, no leſs than curable diſeaſes. I mean not in what I have ſaid, or may ſay, to deride or depreciate its real virtues, but only to enquire what this Proteus is, and whether plain facts, or ingenious fancies, ought to guide us on this ſubject.

Antimony was known to the Greeks, to the Latins, and Arabians; but we leave it to the chymiſts to trace it through its various degrees of mildneſs and of violence.

It is agreed on all hands, that the ſulphureous part of crude antimony differs little or nothing from other ſulphurs; that whatever powers are attributed to antimony, muſt therefore depend on the reguline part; and of courſe that this laſt, like other metallic ſubſtances, can only act upon the human body by being changed into a ſaline ſtate, becoming ſoluble by vegetable acids, by fermented liquors, or meeting ſuch in the ſtomach.

On

On this principle its preparations may be reduced to two claſſes.

Firſt, Where the regulus is not united with an acid, but combined with a certain proportion of its ſulphur.

Secondly, Where the regulus is united with an acid.

Of the firſt ſort in uſe are, the crude antimony, Kermes mineral, ſulphur aurat. antim. glaſs of antimony, and, by the addition of nitre, crocus antimon. liver of antimony, Boerhaave's mild emetic, Pulvis Jacobi dictus, the fever powders of the royal infirmary of Edinburgh, and the calx antimon. Pharmacop. Londinenſis, or diaphoretic antimony.

Of the ſecond ſort, combined with the vitriolic acid, is antim. vitriolat.; with the nitrous acid, bezoardic mineral; with the muriatic, butyr. antim. and mercurius vitæ; or with the vegetable, emetic wine and tartar emetic.

Although emetic wine ſeems to have only a ſmall portion of the antimonial regulus diſſolved in it, yet it varies much in its ſtrength. The ſame obſervation is true with regard to the eſſent. antim. of Dr. Huxham, prepared with glaſs of antimony, as well as what is prepared in the Antimonial Cup, which has determined phyſicians to prefer the emetic tartar, (antimony in ſolutis principiis) of which the doſe, whether it be made with the crocus metallor. or vitrum antim. may be

be more certainly aſcertained; at leaſt, that preparation of it, which is moſt ſoluble in a given quantity of water, is the ſtrongeſt in its effects. We all know, that the baſis of a powder famed for the cure of fevers is the regulus of antimony, perhaps with a ſmall addition of ſome mercurial calx. The world has looked on with ſurpriſe at its real or ſuppoſed effects; and it probably, like other medicines, will loſe a part of its reputation when its preparation is exactly aſcertained. In the mean while it is probable, that the tartar emetic can perform every thing which ſeems to be effected by the powder in queſtion; and we will venture to ſay a few words on this, of which we know the preparation, that will weigh in a juſt balance the merits of all antimonial preparations. Paracelſus, Helmont, and others, having with their chymical preparations cured ſome diſeaſes which had baffled the ſkill of regular phyſicians in the ſixteenth century, mankind were prompted to ſeize with avidity any thing that promoted a cure, and which they could practiſe without regard to time, diet, or other circumſtances; but the early exit of thoſe boaſters of a univerſal noſtrum for health and longevity, and the diſappointments that followed them, brought people back to their reaſon, till Peruvian bark was introduced into Europe, and cured often, as if by magic, not fevers only, but a variety of other complaints, as if it was the univerſal medicine hitherto looked for in vain. It

was

was found however, in many inſtances, to have its diſadvantages, and diſappointed expectation when the ſeaſons, crudities in the primæ viæ, and cacochymy, or ſizy blood, with full veſſels, rendered it improper: but what is immediately to my purpoſe, and a ſufficient reaſon for mentioning this medicine here, the world conceived from it new hopes of a catholicon in the cure of diſeaſes, at leaſt, of fevers.

Borelli, Boerhaave (in the latter part of his life) Sauvage, and many other phyſicians of great repute, within theſe laſt fifty years obſerved, that fevers wore ſome appearances which did not ſuit with the ancient theory of morbid matter; particularly that affections of the mind produced fever or ſudden death, not to ſpeak of many ſpaſmodic affections which came on inſtantaneouſly, and went off without any ſenſible evacuations according to the old rules; that an ague could be ſet aſide by preventing the cold fit; that a ſweating fit, brought on by any means very early in the diſeaſe, ſeemed to remove the fever. Struck with theſe facts, they endeavoured to find out a new theory that ſhould explain at once their ſyſtem, and adopted antimonial preparations as beſt according with it.

The famed Fever Powder completed the myſtery, and phyſic has actually begun to be ſeen once more as it was by Helmont and his ſchool. Numbers at leaſt are of his opinion, "That it is the "part of a ſkilful phyſician to neglect the criſes of "diſeaſes;

" diſeaſes; for that Nature only effects a criſis in " certain periods when ſhe is left to carry all the " burthen alone; in ſhort, that he ſhould conquer " the diſeaſe before the criſis, and neither expect it, " nor attempt to mark it." He adds, " That " having written no fewer than ſeven books on the " criſes of diſeaſes, he gave them to Vulcan." Such is his figurative ſtile. As he was vain enough to boaſt, " that he could ſtifle the infant malady in its " cradle," ſo he ſcrupled not to pronounce, " that " no one deſerved a phyſician's name who was not " poſſeſſed of the ſame powers."* Such were the doctrines of his time; nor are they uncommon in ours.

No ſooner is a fever heard of now-a-days, than every proprietor of a packet of the Fever Powder commences phyſician, from the Counteſs down to the Cobler, directs its doſe, and undertakes for the cure; without conſidering whether it be only a fever-fit of the hour, brought on by yeſterday's intemperance, and heat from loaded inteſtines; or whether really an inflammatory fever fallen on the lungs, the brain, or the inteſtines; or a putrid one, attacking the head with delirium and convulſions. The effect correſponds with the cauſe; if feveriſh ſymptoms were hanging about the patient, and the materials were looſe, and as yet only in the inteſtines, what magic is there in this powder, that a vomit, a purge, or a fit of the choler,

* See Helmont de Tempore, de Febribus.

choler, did not equally poſſeſs in the days of Galen or Alexander Trallian, as well as ever ſince? But in the caſe of fevers truly inflammatory, affecting the ſtomach, inteſtines, liver, or lungs, attended with full veſſels and a hard pulſe, good Heaven, what havock do not antimonial vomits and antimonial noſtrums, indiſcreetly uſed, make among your works! If, on the contrary, the putrid materials have entered into the maſs of blood, and are riveted there, though I have no very particular objection to the uſe of this or any antimonial medicine, as the emetic wine or emetic tartar, whoſe doſe and effects we can aſcertain, which is not the caſe with the above; I yet contend, that theſe alone will not carry off the fever perfectly till it has run its courſe; and that in ſuch fevers the plan I have propoſed, of correctors and antiſeptic vomits, or other evacuants, is not only equally ſafe, but more certain, in their intended operation.

It has been aſſerted indeed, that the ancient opinion of a materies morbi is a mere hypotheſis, and that Coction and Criſis are only words of courſe, becauſe paſſions of the mind, as joy and grief, or cold, and other ſudden cauſes, produce death, or becauſe bark cures an ague without any ſenſible evacuation; that by conſequence fevers are only ſpaſmodic affections marked by certain paroxyſms, or having certain boundaries; that there are ſome diſeaſes, which, by their immediately affecting the nervous ſyſtem, occaſion fevers and prove fatal, where neither the blood nor bile were originally in

fault. But we would aſk thoſe who entertain this opinion, Why four, five, or more bleedings are neceſſary to cure a pleuriſy with certainty and ſafety; why a bilious or putrid fever goes on for three or four weeks, attended with a looſeneſs during the greater part of the time, if the patient is not deſtroyed before that period by cordials, bliſters, or broths, till perhaps on the laſt black ſtool or two the nervous ſyſtem grows quiet all at once; or why, before ſuch a fever ſhows a regular beginning by the ſhivering fit (or what we would call a Formed fever) the ſymptoms of its approach, as reſtleſſneſs and uncomfortable dreams, dryneſs and heat in the palms of the hands and ſoles of the feet, and head-ach, with oppreſſion of ſpirits, are, as if by magic, cured inſtantaneouſly by a medicine which unlocks the hepatic ſyſtem, and which ſhall be mentioned afterwards in the Section upon the Prevention of Fevers? We likewiſe wiſh to be informed where the Catholicon is to be found, that cures the ſymptoms of inflammatory fevers, with fizy blood, by taking off the ſuppoſed ſpaſm all at once; that quiets the pulſe, or cleans the tongue, without the aid of the lancet. Peruvian bark will not cure; nor will ſerpentaria nor ſeneka root in our climate; nor yet will antimony, nor ſuch medicines as Dover's powder, or any other phyſician's powder, antimonial, mercurial, or a mixture of both, in any ſhape. The famed fever powder did not cure in Lady D——k's caſe, though given

given nine days running: it did not in J. S——h, Eſquire's, though given ſix days; and it did not in many more where I was preſent.

That a popular noſtrum, or other preparations of antimony, often get the credit of recovering the patients, I well know; but then the preceding diſeaſe had run its courſe, or the bad ſymptoms, for the conſequence of which honeſt and experienced phyſicians will not anſwer, had at the inſtigation of Ignorance and Impatience frightened the anxious relations into the hands of raſh noſtrum-mongers, about the very time when the powers of Nature had reſtored her. If ſuch applications were confined to ſituations where better help cannot be obtained, or where the antimonial preparations find the materials of putrid fevers looſe, as they very often are on board of foul ſhips in hotter climates, and often towards the end of fevers in this country, the indiſcriminate uſe of ſuch medicines, in proper doſes, might be excuſed: but to ſee uninformed boys, or men whoſe education ſhould teach them better, employing in every caſe, and with ſo little attention or judgement, tartar emetic, antimonial wine, and every ſpecies of antimonial calx, as if they alone contained the univerſal medicine; and to ſee them do this, although they find the pains increaſing, the ſweatings, vomitings, and purgings, thereby induced, not curing, nor even mending or diminiſhing the original diſeaſe, is ſufficient to excite a mixture of

pity and indignation in every one who merits the title of either Phyſician or Philoſopher. I ſpeak to what I have obſerved times without number.

SECTION IX.

BY SUDORIFICS.

IT was remarked in ancient times, as it has been ever ſince, that ſome fevers of the worſt kind were relieved, or went off, with profuſe ſweatings; and that probably, wherever Art was able to copy Nature, the ſame relief might be thereby obtained, or, in other words, the poiſonous matter expelled. Before the middle of the ſixteenth century, Paracelſus and his ſchool gave up venæſection and the antiphlogiſtic regimen in fevers, and introduced the hot and ſudorific one, attempting to cure by ſpecific noſtrums of this ſort, inſtead of uſing means that ſtruck at the cauſe.

Haller complains with juſtice, that the ſame method ſtill obtains in Germany. His maſter Boerhaave made the ſame complaint with reſpect to Holland. I may venture to add, that this pernicious practice prevails in an enormous degree in England, where hot medicines have not leſs prevalence, under the names of Cordial confection, Contrayerva, Serpentary, and Seneka roots, Gaſcoign's powder, Bezoardic powders, &c. I have been ſometimes tempted to think, that a month's

month's peſtilence would ſcarcely make ſuch havock in this city.

In hot climates, where the blood is of a leſs compact texture, fevers often run their courſe in a ſhorter time. Nature, with a more rapid proceſs, digeſts the morbid matter, and throws it off by the ſkin, or, as we ſee in ſome agues, by an eruption appearing about the mouth. Any hot or ſpicy medicine given during this effort, and ſeeming to aid the conſtitution in expelling what was ſuppoſed to be a poiſon, got the reputation of being an alexipharmac. It is true, that ſome of the beſt phyſicians have condemned, and continue to condemn, the preſſing of ſweats, as very hurtful in fevers, except when they are peſtilential: but, if Sudorifics muſt be practiſed, why not uſe thoſe that are antiſeptic, or relax the veſſels of the ſkin, as barley-water, oxymel, orange, lemon, and vinegar and wine whey, or tepid vapours applied to the ſkin, which cannot be attended with any of the ill conſequences of ſpirituous liquors, ſpices, &c.?

SECTION X.

CORDIALS.

MANKIND are in general agreed, that whatever ſuſtains or repairs the ſtrength of the body, is a comforter of the heart, a Cordial or Cardiac, whether it be food, drink, or medicine: but there is not in phyſic any ſubject that ſeems more liable to miſapprehenſion, nor any that is generally leſs underſtood. A difference in climate, ſituation, ſeaſon, country, faſhion, and may I be allowed to add, in party, often contributes to puzzle the caſe. Whatever increaſes the force of the heart, and conſequently the force of the circulation, is conſidered by many writers, and more practitioners, as Cordial; and yet nothing can be more erroneous: for, in inflammatory fevers, accelerating the motion of the blood diminiſhes the ſtrength of the patient.

Give a man, for example, wine or meat in a rheumatic fever, with ſizy blood, and you certainly increaſe the vehemence of the ſymptoms, and weaken him at the ſame time. On the contrary, empty the veſſels that are too full by bleeding, relax the veſſels that are too ſtrict by diluting drinks, and both the bleeding and dilution prove true cordials; for by both the blood is left to circulate more freely. Surely this is common ſenſe, as well as ſound philoſophy.

No

No man will ſay, that a patient juſt ſeized with the choler (a common diſeaſe of the autumn over all England) requires meat and drink, becauſe faint and oppreſſed: he vomits frequently, perhaps twenty times, and purges twice as often, with the aſſiſtance of common drinks, as tea, water-gruel, or imperiale, which laſt is better than either in ſuch a caſe. What is the effect? He becomes leſs oppreſſed, and ſenſibly ſtronger, though ſo much emptier; and recovers immediately. Did this patient, becauſe he was oppreſſed, require meats or wine as cordials?

In the beginning of putrid fevers (and many putrid fevers come upon a full habit) the patient abhors, without knowing the reaſon, foods which eaſily putrify, but pants after acid drinks and fruits; and ſuch are allowed by ſome phyſicians who follow Nature. Oranges, lemons, citrons, grapes, peaches, currants, nectarines, are devoured with eagerneſs and gratitude. Can the diſtillery or the apothecary's ſhop boaſt of ſuch cordials?

I ſaid that the patient, if left to his natural feelings, abhors foods which eaſily putrify, as fleſh meats much boiled, or ſodden for a long time, particularly the meats of carnivorous animals, rapacious birds, rapacious fiſhes, broths, and jellies made of their eggs. Such likewiſe may be reckoned acrid vegetables, the cruciform and umbelliferous plants, ſpicy pickles, &c. all which produce fœtid belchings, loathing of food, bitter taſtes, offenſive ſmells,

nauſeas, heartburns, bilious vomitings, heavineſs of the head, or loaded ſtomachs.---See Sauvage's Pathologia Methodica.

It deſerves notice, that all ſtimulating ſubſtances and warm cordials are peculiarly improper during the rigor with which many fevers begin, and particularly where they are ſtrong in proportion to the length of that rigor, and the cold fit. In ſuch a ſtate, by diluting and relaxing at the ſame time with the moſt watery drinks, the cold fit will terminate ſooner, and the patient be thrown into a relieving ſweat much more effectually, than by the warmeſt cordials.

Nothing can be of greater conſequence, in the treatment of fevers, than the diſcovering when there is too much ſtimulus, and when too little. In general this may be aſcertained by the pulſe; for while that is accelerated above its juſt pitch, from eighty to a hundred and forty in a minute, ſurely the circulation requires not an additional ſpur. When the pulſe is about ſeventy, or under it, we will ſhow at what time, and in what circumſtances of putrid fevers, that prince of cordials, Wine, may be given for ſupporting the ſtrength, and keeping up the circulation. We have delivered our opinion of fruits and acidulated drinks when the pulſe is above eighty. On the ſubject of hot medicines hear our Engliſh Hippocrates. "It is "to me ſufficiently evident, that the fever alone "brings heat enough along with it to prepare the

"feveriſh

" feverish matter for coction, and that more intense " heat is not to be called in by any hot regimen " from without."---Sydenh. p. 141. Edit. Genev.

The second sort of cordials are such as increase the motion of our fluids. But is it not apparent, that in the beginning of fevers these move so briskly as to require no new stimulus? Yet scarce a day passes, in which some new provocative to render the circulation more rapid is not added to our Materia Medica; for what good purpose, it is not easy to imagine: nor is it easy to account for the enthusiasm that, in a country so enlightened by learning, and so turned to enquiry as this, prevails respecting the powers of particular nostrums or favourite drugs: nor is there one in the whole catalogue, to which this observation is more applicable than the Cordial Confection; Ladies and Nurses, Apothecaries and Physicians, all joining in the error, as if by universal consent, and believing that it alone can enable Nature to accomplish all her works with efficacy and success. Let us for a moment review its composition, and see what can be done by the intrinsic energy of its ingredients on the human frame.

The fresh tops of rosemary, juniper berries, cardamom seeds without their husks, zedoary root, and saffron, have their tincture extracted by twelve pounds of a small spirit, which is ordered to be evaporated to two pounds and a half (by which many

many of their fineſt parts muſt neceſſarily fly off) to which the following ingredients, reduced into a very fine powder, are added, to make the whole into our renowned catholicon, viz. two ounces of cinnamon and nutmegs, and one of cloves; two pounds of fine ſugar, and ſixteen ounces of compound powder of crabs claws, in the proportion of twelve ounces of the tops of the crabs claws to three of prepared pearls, and three of prepared coral: that is to ſay, the lives of our families and friends muſt be committed to a teſtaceous powder and the virtues of aromatic and carminative oils, which every chymiſt knows contain all the peculiar powers of ſuch ſubſtances, as in proportion to the ſtrength of thoſe oils their ſpirit is acrid, inflaming, heating, exciting to the animal ſpirits, and ſtimulating to the nervous ſyſtem. In cold and watery conſtitutions, in hypochondriacal and flatulent complaints, or in old age, when given with caution and ſkill, either ſingly or combined---in ſuch caſes we readily acknowledge them to be generous, and perhaps powerful, as well as ſafe medicines; but their application in every kind of fever, where heat, motion, or inflammation, are apt of themſelves to go too far, we hold pernicious. What then are we to think of giving them in ardent fevers? and yet, may I be permitted to aſk, in what fevers are they not given, and poured in, to half an ounce, or even much more, in the ſpace of

four

four and twenty hours for ſeveral days together, by men of whom better things might be hoped?

Becauſe the people in hot countries uſe ſpiceries with every thing, does it follow that ſuch are to be uſed indiſcriminately in habits overwhelmed with ſizy blood, or where fevers are fed by putrid juices accumulated in the primæ viæ, the meſeraic ſyſtem, or the veins?

SECTION XI.

DIET.

IT has been matter of ſurprize, that the Parent of Phyſic ordered ſo few medicines for the cure of diſeaſes, while he paid ſo much attention to the Diet of the ſick. His book on that ſubject will ever remain a monument of his ſkill, for the many maſterly directions contained in it, though little regard is paid to them in modern times; as our beſt phyſicians have remarked in terms of juſt diſapprobation.

"By the obſtinacy of nurſes, and mean indul-
"gence of weak phyſicians, in every ſort of fever,
"even the moſt acute not excepted, the patients
"are allowed broths, made of one ſort of meat or
"other, all hours of the day; and chicken, which
"they will not allow to be meat, is likewiſe given."
Such is the complaint of the ableſt phyſician of his time,

time, known by the name of The moſt fortunate Riverius.

The practice of allowing the ſame kind of food to all feveriſh patients, and leaving ſo important an affair to old nurſes, or only forbidding abſtinence from coarſe foods, is animadverted on by a learned and judicious commentator on the Greek phyſicians, who, with great reaſon, condemns the general want of attention in our times to their rules for curing fevers by Diet. He adds, "The ſame "miſchief is done now as formerly by improper "diet, while the vulgar do not, for want of "judgement, diſtinguiſh what ſhare of that miſ-"chief is occaſioned by the miſmanagement of "the patient, and what by the neglect or igno-"rance of the phyſician."

What would be the aſtoniſhment of any young phyſician, who had carefully ſtudied the obſervations of the Hippocratic ſchool both in ancient and modern times, but who had ſeen few ſick, to hear at the firſt conſultation, that while the patient had been blooded perhaps repeatedly, according to circumſtances, and to the beſt rules laid down by the firſt writers, there was no objection made to his being fed, as at a feaſt, with broths, beef tea, jellies, river fiſh, and perhaps chicken, tripe, or veal, inſtead of panada without ſpiceries, barley water, oxymel, hydromel, and currant jelly! Had this ſame young phyſician made himſelf maſter likewiſe

of

of anatomy and phyſiology, ſo as to become acquainted with the powers of the viſcera, the nature of the gall, the pancreatic juice, the doctrine of chylification, the quantity of putrefaction generated by heat in animal bodies, the ſpeedy aſſimilation by which foods of a putreſcent nature ſupply more diſeaſe, &c. would he not be tempted to think that all he had read was intended only to miſlead, or that phyſicians now-a-days were ſtrangers to ſome of the cleareſt and oldeſt principles of their profeſſion? If he ſhould happen afterwards to meet with thoſe who had dared to make the dietetic plan coincide with the antiphlogiſtic, in which bleeding to its proper extent was accompanied by drinks made of barley and other farinaceous ſubſtances; in which a diſtinction was made between weakneſs and oppreſſion, between the diet of a fever in the beginning, and the treatment of it about its height; in which too a cloſe attention was paid to the appearances of the blood, to the Juvantia and the Lædentia, to diſeaſe in the veins, or to fever fed by the juices in the cæliac ſyſtem; it is not very difficult to imagine in what manner he would be ſtruck by a compariſon of two modes of practice ſo ſtrangely different.

Hippocrates preferred his barley water in fevers to every ſort of diet, on account of its ſlimineſs, ſweetneſs, and equal conſiſtence; as moiſtening moderately, as waſhing away every thing that ought to be waſhed away, as neither binding nor diſturbing

diſturbing the belly, nor ſwelling the ſtomach; and as a food ſufficiently light, and weak at the ſame time.

Theſe obſervations on the miſapplication of foods in fevers ſhould be underſtood to refer to the inhabitants of London or Paris chiefly, the improprieties I have mentioned being much leſs prevalent elſewhere.

But in thoſe great cities the evil appears to me too ſerious not to call for this public teſtimony of my diſapprobation. Indeed, if a ſtop is not put to it, the Healing Art muſt degenerate into an ignoble monopoly.

Wherever climate produces immoderate heat, benevolent Nature has taken care to relieve its parched inhabitants with fruits or juices adapted to their ſituation. The people of Spain and Portugal, of Turkey, and Aſia in general, live on grapes, peaches, nectarines, figs, melons, and rice. Thoſe who live within the Tropics have their woods, or groves, filled with orange and lemon, citron, and other delicate fruits. As they approach nearer the Line, they have alſo pine-apples, chaddocks, and cocoa nuts. On ſuch they live in health, and by ſuch they recover when ſick. What might we not learn from them in dieting our ſick? Nature too points the way. A man in a fever pants after every thing that can quench his thirſt; and when oranges, ripe fruits, currant jellies, are craved by his feelings, and ſwallowed with delight, muſt he be oppreſſed

oppreſſed with broths, and loaded with ſpices and volatile drugs?

It appears then on the whole, that the food in a putrid fever ſhould conſiſt of barley, rice, oatmeal, wheat bread, ſago, ſalop, mixed with wine, lemon, orange, citron, or chaddock juice, jellies made of currants and other aceſcent fruits; and when broths are thought abſolutely neceſſary, which probably happens but ſeldom, they ſhould be mixed with currant jellies, citron, lemon, and orange juices.

The ſame diet is proper where the diatheſis is inflammatory, but without wine.

Having already ſeen the effects produced on our juices by heat and cold, by ſeaſons, ſituation, and climate, it will not be difficult to aſcertain in what caſes that, which may not be improper food at one time, may be highly ſo at another. Animal fleſh that has been fed on vegetables only, and not long kept, as well as broth made of it and mixed with lemon juice, may, on recovery, be uſed more ſafely than the fleſh of thoſe fowls or birds which feed on fiſh, worms, and inſects of different kinds, and which are among the higheſt luxuries of the Epicurean race; I ſpeak of geeſe, ducks, pigeons, moor-game, ſnipes, plover, woodcocks, &c. eſpecially if they are kept till almoſt corrupted.

Sea fiſh brought to the London market are ſcarcely a proper food in ſuch circumſtances, being more or leſs tainted before they can be preſented

on

on our tables. River fiſh, as ſmelts and the flat fiſh, may, no doubt, be uſed with leſs hazard; but in general they are fed on animal ſubſtances, and we all know how much ſooner they become putrid than fleſh meats, eſpecially in the ſummer heats.

Indeed, where people's veins are, like thoſe of Holland, filled with vegetable ſubſtances, fiſh muſt be acknowledged to do ſome good, rather than much harm; and perhaps they might be uſed after fevers of the inflammatory ſort, if taken in great moderation, eſpecially where the habit has been accuſtomed to them.

SECTION XII.

CANTHARIDES.

THERE is not perhaps in the whole circle of phyſic any thing ſo little underſtood, and ſo frequently abuſed, as the application of bliſters in fevers; nor any thing, of which the indiſcriminate uſe is followed with more ſudden and fatal effects, concerning which there is leſs diſpoſition to receive information, or where phyſicians are more apt to reſign their underſtandings to the prejudices of the vulgar. How many patients have we ſeen in the firſt, ſecond, or third days of both putrid and inflammatory fevers, hurried into delirium, mortifications of the brain, and their dreadful conſequences, from this very cauſe!

Under

Under theſe circumſtances I know not any way in which the cauſe of medicine can be ſo much ſerved, as by expoſing ſo general and ſo miſchievous an error; for which purpoſe I have here collected moſt of the lights that ſound theory or experienced men have furniſhed on ſo intereſting a ſubject.

As far back as the days of Diaſcorides, we find the following circumſtantial account of the effects of Cantharides given inwardly: "From the mouth to the "bladder all the parts feel corroded; there is a ſmell "of pitch or of cedar; the right ſide of the præcordia "is inflamed; the urine is paſſed with difficulty, "and blood is ſometimes thrown off with it; "membranes are rendered by ſtool, as in a dyſentery; "the ſick are oppreſſed and have loathings as from "a debauch, are ſeized with faintings, troubled "with giddineſs, and at laſt become delirious."*

"The powder of Cantharides mixed with "blood juſt drawn away," ſays Baglivi, "turned "it into a black and rather livid ſerum, when "ſome of the ſame blood, not mixed with them, "underwent no ſuch change.†

"‡The original ſerum was alſo rendered more "liquid, and ſo diluted as ſcarcely to be coagulated "with heat."

For the fatal effects of tincture of Cantharides thrown into the jugular veins of a dog, ſee the ſame author; and particularly how much a dilution, with twelve pound of common water, diminiſhed

* Cap. I. Lib. vi. † Cap. I. Exp. iii. ‡ Cap. I. Exp. iv.

the complaints. The effects on diſſection were very particular: the viſcera remained entire; but all the blood of the viſcera and veſſels became very black, very looſe in its texture, not at all coagulated, with little drops of oil on its ſurface: the bile in the gall-bladder was blackiſh, and there was no mucus left on the inſide of the bladder. Let us now ſee what happens by the application of cantharides to the ſkin as Bliſters.

In fevers the pulſe is made quicker and more frequent, at one time fuller, at another more contracted; the dryneſs of the tongue, thirſt, and heat, are increaſed; the bladder is in many caſes tormented with ſtrangury and bloody water, ſometimes coming away in drops, and ſometimes totally ſuppreſſed; the mucus of the bladder is now and then paſſed; and where ſuch effects have been produced by bliſters, the bladder has, on diſſection, been found ulcerated: therefore it cannot be doubted, that the acrid parts of the cantharides, by entering the pores, produce ſimilar effects with the internal uſe of them; acting as a true ſolvent of the blood, changing it into an ichorous ſtate, and filling it with ſuch acrid ſalts as are always diſpoſed to go off by the kidneys, exciting more or leſs pain continually, and waſting the mucus which lines the bladder and urinary paſſages.

On their application in caſes of delirium, Baglivi obſerved, that the pulſe grew obſcure, though formerly

formerly large and deep; and that the arteries only returned to their former manner of beating when the ſalts of the bliſters were waſhed off by the kidneys, which is generally the work of more or leſs than three days, according to circumſtances.

Experience proves, that wherever the ſalts, which ought to be carried off by the urinary paſſages, are retained in the blood, the urine is thin and watery, and the head or brain affected: but of ſuch ſalts cantharides are full. Deliriums follow the retention of ſalts in the blood; the head is moſt affected by Spaniſh flies, next to the urinary paſſages; and as it is evident, that where the head is moſt affected in fevers, there the blood is moſt diſſolved, is it not reaſonable to conclude, not only that bliſters are unneceſſary, but that, in fevers with diſſolved and acrid blood, where diſorders of the head and nerves are ſo frequent, bliſters will induce them more ſpeedily, and render them more violent?

The moſt ſanguine advocates for the uſe of bliſters allow, that they often bring on wanderings and ſtartings of the tendons, or at leaſt increaſe ſuch ſymptoms.

On the whole, to apply the greateſt ſolvent of the blood where it is already too much diſſolved, to increaſe the acrid ſtate of the juices by the moſt acrid ſalt, and to excite by the briſkeſt ſtimulus the arteries already agitated above mea-

ſure, we may with Dr. Glaſs affirm, is contrary to right reaſon and common ſenſe.

It is regretted, that Dr. Glaſs's excellent Commentary on Bliſters is not publiſhed in a language better underſtood by many of thoſe whoſe department among the ſick is ſo conſiderable.

Dr. Gilchriſt, though prepoſſeſſed in favour of bliſters, acknowledges, that they exaſperated all the ſymptoms of the nervous fever deſcribed in the Medical Eſſays of Edinburgh, by making a ſufficiently full and ſoft pulſe ſmall and contracted, as long as their effects remained in the blood; and that the ſame appearances recurred as often as their application was repeated.

"At a time when colliquative fevers raged at "Rome," ſays Baglivi, "the Galeniſts propoſed "to draw off the poiſonous qualities of the blood "by bliſters in great numbers; but in fact the "conſequences were, greater delirium, convulſions, "increaſe of fever, abſceſſes in the viſcera, and "death; the maſs of blood being more diſſolved, "and rendered more acrid, by the cauſtic ſalts of "the cantharides." He adds, "Where, with "delirium attended by an acute fever and a dry "tongue, bliſters were applied in the hoſpitals, all "the patients quickly died, and moſtly in convul-"ſions." Would to Heaven, that, admoniſhed by ſuch diſtreſsful events, we may take time, and learn to uſe only cooling antiſeptic emulſions, or bleeding when neceſſary, which would probably

happen

happen but ſeldom; and then, like that great man, we ſhould have the joy of prolonging, inſtead of ſhortening, the lives of multitudes!

When, my countrymen, will ye begin to practiſe the diſcretion recommended by one of the wiſeſt phyſicians that ever wrote? "Si quid "movendum eſt, move: ſi nil movendum eſt, ne "moveas." How many authorities might be quoted in ſupport of this doctrine!

Mercurialis had the good ſenſe not only to inculcate the moſt mature deliberation previous to the application of bliſters, but to condemn the indeterminate uſe of them in all ſorts of fevers. The ancients uſed even ſinapiſms only in fevers attended with drowſineſs, oppreſſion, or lethargy, carefully avoiding them in others: "Therefore," adds the author laſt mentioned, "if our bliſters "are ſtronger than their ſinapiſms, how ſhall we "account for uſing them in ſo undiſtinguiſhing a "manner?"

Beſides the teſtimony of theſe writers, we find others of the firſt reputation, who aſſert, that they have ſeen evident miſchief done by bliſters, in promoting putrefaction.—See Tiſſot de Febre Biliof. Lauſann. Van Swieten on Boerhaave's 75th Aphoriſm; Carol. Richa on the Putrid Fever of Turin; and Bianchi from Guidott.

SECTION XIII.

BY RECTIFYING THE AIR.

WHEN a human body of ninety degrees of heat is ſurrounded by an air of forty-five degrees, almoſt one half of its natural heat is taken off at once. In fact, human bodies can by an air cooler than their own temperature be cooled more ſpeedily than by any medicines or liquor given inwardly; and the only queſtion is, Whether it can be done with ſafety?

The air that is drawn into the lungs ſhould be cold and moiſt, while the body is ſo well covered as not to have the neceſſary perſpiration ſtopped. For the ſame reaſon the bed and bed-chamber ſhould be large, and never without a chimney; the ſhirt and the bed-linen often changed. I have frequently wondered how the German phyſicians can go on allowing their patients to live in rooms where the air is ſo heated and ſpoiled by their ſtoves. It is, no doubt, a favourable circumſtance for the Germans, that they are not ſuch devourers of animal food as the inhabitants of this iſland.

It is the opinion of Dr. Arbuthnot, to whoſe ingenious account of the Air, and its effects on our bodies, I refer the reader, That renewing and cooling the air in a patient's room, by opening the bed-curtains, door, and windows, in ſome caſes letting it in by pipes, and in general the right management

management of air in the bed-chamber, is among the chief branches of regimen in inflammatory diſeaſes, provided ſtill that the intention of keeping up a due quantity of perſpiration be not diſappointed.

By the officious and miſtaken care of ſilly nurſes in this reſpect, the diſeaſe is often increaſed and lengthened, or even proves fatal, eſpecially in ſtrict habits. Numberleſs indeed are the miſchiefs which ariſe from depriving the patient of cool air; the changing of which, ſo as to remove the putrid ſteams, is moſt of all neceſſary in putrid diſeaſes.

Let it be added, that many great effects and ſudden alterations may happen in human bodies by their inhaling outward air, with all its qualities and contents; and that this, perhaps, accounts for epidemical diſeaſes better than the checking of perſpiration merely.

It will be likewiſe adviſeable to try the effects of fixed air externally, as well as internally, in caſes of putrid fevers, in the manner, and by the apparatus, invented by the learned and ingenious Dr. Prieſtly, and communicated to the public in his Directions for impregnating Water and other Drinks with Fixed Air.---See pag. 18, 19, 20.

SECTION XIV.

OF THE CURE OF PUTRID FEVERS IN PARTICULAR.

HAVING endeavoured in the firſt and ſecond chapters to point out the general Cauſes of Fevers, and the particular Symptoms that diſtinguiſh the Putrid from the Inflammatory, which, according to their more ſimple or complex nature, take rank as Bilious, Putrid, Camp, Hoſpital, Jail, Petechial, Malignant, or Inflammatory, and having ſpoken above of the Treatment that is alike applicable to both; I now proceed firſt to ſpeak of the Cure of the Putrid Fever in particular, to which I hope it ſhall appear that our general doctrine of an antiſeptic plan will apply, with an univerſality greater or leſs, and nearly in proportion to the degree of degeneracy in the humours.

The ancients having ſeen, that choler or bile thrown upwards, or going downwards with hurry and violence, did in many inſtances ſpeedily carry off ſcorching heats, great thirſt, foulneſs of the tongue, great ſickneſs, intolerable anxiety, oppreſſion, and debility, as well as pain in the ſtomach and bowels, very wiſely encouraged the diſcharge by diluting drinks, by vomits that ſhook the whole body, or purges which they found, or had been taught to believe, were calculated to diſcharge particular humours. They could not indeed diſcover, à priori, what would correct this or the other

other offending or vitiated juice, but obſerved very accurately what ſeemed in fact to do good or hurt. The moderns know, by their acquaintance with chymiſtry, that vegetable acids and aceſcent fruits correct putrid bile; that mineral acids, properly diluted, preſerve animal ſubſtances from putrefaction and decay: and yet the ſtomach and inteſtines ſhall often be loaded with corrupted materials, and the blood almoſt putrified in the veſſels, without our having the attention to enquire whether either of thoſe acids be at hand, or the ſkill to uſe them, where even the very exiſtence of the patient depends upon it. I ſpeak to what I have ſeen.

Thoſe ſame ancients, whom ſo many profeſſors of phyſic now-a-days affect ſo much to deſpiſe, learned from experience alone, that melons, fruits, oxymels, were good in putrid fevers, by being correctors of bile (which was their general name for putrid humours, whether green, yellow, brown, or black) and therefore recommended and gave them, while we (I ſpeak of the greater part) withhold them, from a fear of their griping, or from a notion of their inſignificance.

In ſhort, if we will take the trouble to conſider what foods, drinks, and medicines, are beſt fitted to change or carry off thoſe juices which diſorder our whole frame, hurry our circulation, diſcompoſe the nervous ſyſtem, and oppreſs by their remaining in our bodies unevacuated or uncorrected; of all which circumſtances our acquaintance with

chymiſtry,

chymiſtry, and a more copious materia medica, ſhould make us ſufficient judges; we ſhall be convinced, that our practice is never ſo ſound as when it reſembles moſt that of thoſe maſters of antiquity, whoſe works rendered medicine a ſcience, and gained themſelves immortal renown. Beſides the aids derived from correctors and medicines which empty the ſtomach, inteſtines, and all the viſcera that can be cleared upwards or downwards by their neareſt and moſt natural outlets, it has been found that a part of ſuch diſeaſes may, with the aſſiſtance of proper diaphoretics, be diſcharged through the ſkin; and that repoſe, whether natural or procured by proper ſedatives and opiates---that abſtinence from all promoters of putrefaction, fiſh and meat, volatile ſalts and acrid vegetables---that indulgence in a due quantity of wine, and avoiding the abuſe of blood-letting, and bliſters made of cantharides or other ſeptic ſubſtances---that all theſe, I ſay, have their ſhare in the cure of putrid fevers, as will be ſeen in the following ſections.

SECTION XV.

VOMITS.

THERE are a variety of medicines now in uſe for unloading and ſhaking the ſtomach, of which the moſt gentle are infuſions of carduus benedictus, or flowers of chamomile. In bilious

bilious vomitings a little lemon juice in warm water, or cream of tartar drink, are preferable to bitter infuſions.

Where it is neceſſary to clear the ſtomach effectually of its contents, the powder of ipecacuan root, or its infuſion in water or wine, which is better, as being leſs acrid, than the powder, will prove ſufficient: but where the habit is to be ſhaken, or viſcid matter to be looſened, antimonial wine and tartar emetic are preferable: nor have I any objection to Dr. James's powder for ſuch a purpoſe, if you can be ſure of its vomiting.

If vomits of the common ſort were given towards the end of putrid fevers, I doubt not but they would in many inſtances tend both to looſen the materies morbi, and throw it off with more expedition; but this would require a proper regard to the other ſymptoms, as well as to the ſtrength of the patient. The doſes of each are ſo well known, that I need not ſay more on this ſubject.

SECTION XVI.

ANTISEPTIC PURGES.

WE have already ſeen that the doctrine of Purging in fevers of the putrid kind is not new, though difficult; and that it has been practiſed occaſionally by old and later writers; but the mode of doing it daily till the patient

patient has obtained ſleep, has not, ſo far as I know, been recommended by any; nor has the nature of thoſe remedies, which correct and carry off at the ſame time, been conſidered as it deſerves, though ſuch ſeem, I had almoſt ſaid, alone able to quiet the pulſe, and procure ſleep; the two indications, in the treatment of putrid fevers, upon which the cure chiefly depends.

Where there is already a looſeneſs, no uncommon attendant on putrid fevers, in the beginning the antiſeptic whey,* and the opening antiſeptic drink,† generally prove ſufficient. Where the habit is coſtive, and ſtools difficult to procure, I know nothing of equal power with the antiſeptic purging apozem,‡ or the aperient ſedative draught.§

It is common for ſome of our modern phyſicians not only to deride the ideas of the ancients about elective purges, but to take the alarm at purging to any great degree: what ſenna or jalap will not do, no other drug will effect. But I muſt take the liberty to differ from them both in the firſt and ſecond inſtance, becauſe I know, from long experience, that in many fevers the purging, whether natural or procured by art, muſt go on for many days, and will rather be

* See our Formulæ Medicamentorum, No. I.
† Ibidem, No. IV.
‡ Ibidem, No. V.
§ Ibidem, No. VI.

be moderated than increaſed, as well by the aperient drink above mentioned, as by the aperient ſedative draught; and that, while a common purge cannot touch the feveriſh materials, the antiſeptic purging apozem will unlock and diſſolve, or diſcharge them. I muſt add one word more: towards the end of putrid fevers a few grains of rhubarb will procure ſleep, when other opiates prove ineffectual; and indeed it becomes neceſſary to ſtrengthen the ſtomach and bowels, on which ſo large a ſhare of the diſeaſe had fallen with ſeverity.

SECTION XVII.

ANTISEPTIC DRINKS.

IN former times the greateſt attention was paid to every thing that ſeemed to relieve or offend the ſick. The old phyſicians obſerved, with particular care, what Nature craved, and found, that while foods, eſpecially animal ſubſtances, were commonly diſreliſhed, and often abhorred, Drinks were greedily deſired; and that thoſe of the ſour and aceſcent kind only appeaſed the patient's longing. Our wiſe forefathers took the hint, and contrived ſuch drinks. Accordingly oxymel was a principal febrifuge with Hippocrates; ripe fruits were recommended by Araeteus and Trallian; Galen applied vinegar outwardly

wardly till the ſkin was inflamed, embrocating with it the axilla, inguina, anus and feet, when there were marks of bile in the primæ viæ; and ſo long ago as the tenth century Rhazes gave acids to prevent the plague.

It is remarkable, that in hot countries Nature ſupplies the inhabitants with the fineſt acid or aceſcent fruits: we have already taken notice how provident ſhe has been in adapting them to the degrees of heat and putrid tendency in different climates. Nevertheleſs it is known, that many modern phyſicians attempt to cry them down, even where it can be proved that they are not leſs neceſſary, or leſs efficacious, in putrid diſeaſes here, than in Greece, Italy, Africa, or the Weſt-Indies: but this prejudice has not equally prevailed in other countries. "The juices of "citron and ſorrel," ſays Senertus, "reſiſt putre-"faction, peculiarly ſtrengthen the heart, correct "the feveriſh habit, and have aperient powers "at the ſame time." "And," ſays Van Swieten,* "the juice of ripe fruits requires no preparation, "extinguiſhes thirſt, tempers heat, opens the "belly and urinary paſſages, and furniſhes the "moſt exquiſite ſolace to a ſtomach oppreſſed "with putrid bile." Of his maſter, Boerhaave, we are told, that in a ſtubborn putrid caſe he ordered, with ſucceſs, ten pounds of cherries daily. One of the ableſt phyſicians of this century has obſerved,

* Sect. 88. T. i.

obſerved, that "it is a vulgar error to ſuppoſe "diſeaſes are made more violent, or more fre- "quent, by an intemperate uſe of fruit." To add one quotation more from the beſt writer we know upon bilious diſeaſes, "Small draughts of "barley water with rob of elder or currants, "ſyrup of lemons and raſpberries, not forgetting "ripe fruits, mulberries, ſtrawberries, grapes, "cherries, pine-apples, are excellent; for the "virtues of acids are ſuch, as to correct all "putrefaction, to reſolve by their detergent "qualities all bilious concretions, to favour and "promote all the ſecretions; and, while they do "not relax the ſolids too much, they refreſh "the ſpirits by their fragrance." I may add, that the juice of ſtrawberries and currants extracted, with water, makes an admirable drink, as the fruits themſelves make a food along with bread; and we have the rob of the laſt in perfection and plenty all the year round, to ſupply the place of citron or lemon-juice. When that cannot be readily procured, the fleſhy grape; and where it cannot be obtained, the gooſeberry, or the Jargonell and Bury pears, furniſh the beſt proviſion in putrid fevers, and cure the bilious dyſentery like a charm.

Such are the virtues of vegetable acids: and when phyſicians diſcover, by an early attention to the ſmell of the ſweat, the urine, or fæces, or a cloſe examination of the colour of the ſkin, tongue,

tongue, &c. a tendency to a putrid ſtate, they cannot only cure many dangerous, but prevent many fatal diſeaſes by ſuch means.

Decoctions or infuſions of frumentaceous ſubſtances ſeaſoned with ſea ſalt, cream of tartar drink, thin wines, juice of lemons, and plain vinegar, do all contribute largely to an immediate, and perhaps a laſting correction and change of a corrupted ſtate of juices.

When the diſeaſe is not outrageous, nor the putrefaction extreme, the vegetable acids are generally ſufficient; and when no inconvenience is found from their uſe, they may be given very freely, and indeed are probably neceſſary. It is a miſtaken notion, that they will produce the colic, or diſagree where there already ſubſiſts one, as in putrid caſes of colic we know that nothing proves a ſpeedier cure.

Chymiſtry has moreover furniſhed the ſhops with the nitrous, muriatic, and vitriolic acids; which, according to the chymiſts, differ more in their degree of concentration than in their other qualities. In a very putrid ſtate of the juices they are uſed with the greateſt advantage. The muriatic acid has with me the preference, not only from the obſervations I have made of its effects, but from the univerſally acknowledged antiſeptic power of the ſea ſalt, from which it is extracted.* The virtues of thoſe acids in general,

* Boerhaave, Baglivi, Tiſſot, Arbuthnot.

ral, when given internally, are diſtributed through all the parts of the body, the mouth, ſtomach, blood veſſels, and ſecretory organs: for, applied to the mouth, they increaſe the ſecretions of ſaliva, and allay thirſt: applied to the fauces, in the ulcerated and malignant ſore-throat, they correct the putrefaction, and preſerve the parts from gangrene, or even ſtop its progreſs when already begun: taken into the ſtomach, they excite appetite by correcting its juices; for nothing palls it more than putrid matter lodged there. It is a fact well known, that they are very uſeful in the dyſentery; I mean the bilious one ſo common in armies during the autumnal ſeaſon, where they correct the corrupted fomes, and act as ſtrong antiſeptics, hindering the putrid proceſs in the animal œconomy.

Finally, the beſt writers, and the moſt ſucceſsful practitioners, are agreed about their great uſe in putrid fevers.

Since Dr. Prieſtly has contrived a method, ſo eaſily executed, of communicating the delicate and agreeable flavour, or acidulous taſte, which can be produced by the mixture of fixed air with the drinks of patients ill of putrid fevers, it ought likewiſe to be practiſed, as it promiſes good effects in ſuch caſes.

SECTION XVIII.

BY ANTISEPTIC DIAPHORETICS.

THERE ſcarcely exiſts a putrid fever, where a part of the offending effluvia will not, by means of theſe, find its way to the ſkin, and in ſome caſes relieve beyond all expectation. Acids mixed with cold water often act as Diaphoretics: the antiſeptic whey,* or antiſeptic wine-whey,† do ſo in a remarkable degree; and the diaphoretic ſedative draught § is perhaps the medicine, of all others hitherto known, that is both moſt ſudorific and ſedative, if not given too early in the diſeaſe, even where the ſkin has been long dry, and the patient harraſſed with the feveriſh fidgets and reſtleſſneſs.

SECTION XIX.

BY REPOSE, BY MEANS OF SEDATIVES AND OPIATES.

NATURE has in the ſtrongeſt manner pointed out the neceſſity of Repoſe in fevers: for no ſooner is a perſon ſeized with the fever, than the joints generally loſe their power of ſupporting the frame; an erect poſture becomes almoſt intolerable, the diſeaſe increaſes in a very conſpicuous degree, the

* Formulæ Medicamentorum, No. I.

† Ibidem, No. II. § Ibidem, No. VII.

the morbid juices enter more deeply into the habit, and the dangerous ſymptoms grow in proportion to the time the patient attempts to ſit out of bed. While the circulation labours (either from the fullneſs of the veſſels, or from a bad quality in the circulating fluids) it becomes indiſpenſably neceſſary, that the body ſhould be laid in an horizontal poſture, and remain ſo a longer or ſhorter time, till the juices are diminiſhed in quantity, or changed in quality; and it is known, that by lying in a relaxed ſtate under the bed-cloaths, together with the uſe of proper drinks and an antiphlogiſtic or antiſeptic regimen, the patient is in general ſooneſt recovered.

It was a complaint of old, that the ſick were killed by their phyſicians obliging them to take exerciſe in fevers. Hippocrates mentions Herodicus having deſtroyed his patients by ſuch a practice; and amongſt ourſelves it is not uncommon to ſee people, who from their own inattention, or the neglect of their medical friends, ſhall walk about two or three days with a fever upon them; a conduct which often proves fatal in the event. Sanctorius has remarked, that there are particular hours in the four and twenty, when the perſpiration is greatly increaſed, even in healthy bodies. Who does not know how much heavier the body and ſpirits feel by getting out of bed when the perſpiration is at its height? How much

muſt the caſe be affected, where the juices are in a putrid ſtate, by retaining ſuch matter in any quantity!

Perpetual watchings deſtroy the ſtrength,* increaſe crudities in the humours, and often throw the ſick into phrenzy or fatal convulſions. We know that the increaſed motion of the blood, or the pulſe growing harder in inflammatory diſeaſes, prevents the patient's obtaining ſleep; and that in general every kind of acrimony in the juices produces ſo much irritation in the circulation, as to hinder this moſt deſirable relief.

Sleep is the ſick man's Elyſium, the ſtate his ſoul pants after: it ſuſtains our hopes, digeſts our humours, and prevents delirium or deadly convulſions. To procure it, has been the deſideratum of all ages. Our bodies cannot be ſupported in bilious or putrid fevers without its benign influence. Could we with certainty procure it in fevers, we ſhould often be enabled to make the happieſt prognoſtic, where we can promiſe nothing without it. When we know how to produce ſleep, the diſeaſe can ſcarce prove deadly: I ſpeak of natural repoſe. Attempts to force it in the beginning of Inflammatory fevers, by opiates, (before the hardneſs is taken off from the pulſe by venæſection, revulſions,

* It was a practice of General Cohorn's to carry on his ſieges in ſuch a manner as never to allow any repoſe to the beſieged, by which means they were thrown into fevers; while other generals uſed only to keep up their fire in the night.

revulſions, fomentations, or emulſions) do infinite miſchief: but in Putrid ones, which ariſe from irritation, opium given with lemon juice or vinegar, one or two grains of the one with a ſpoonful of either of the other, has ſuch wonderful effects ſometimes towards the end of the fever, as to deſerve the character of a cure wrought by the hand of God, where every other remedy has failed. I ſpeak from experience.*

Many things have been tried to procure ſleep in all ages. Araeteus obſerved long ago, that a profound quiet begins the diſpoſition to it: he forbids a ſingle word to be ſpoken, or voice heard, or even the tread of a foot, the leaſt noiſe, or any light: he ſays, that great heat and great cold prevent it; that moiſt air and ſoftening diet promote it; that the ſame effect is produced by the fall of water, the gentle whiſtling of the wind, and the ruſtling of poplar leaves. Latter writers have added little more, excepting the uſe of opium with acids; but, unfortunately, they ſeldom can be given with propriety at a

 period

* Sir William Duncan gave the author of this Enquiry a hundred and ſeven drops of laudanum within twenty-four hours, on the ſeventeenth day of a Miliary fever, in a delirium of four days ſtanding, with a clean tongue, and cured him:† nor can he let ſlip this opportunity of acknowledging with gratitude the many juſt and uſeful hints, for the treatment of Putrid Fevers, which he received from that very able and conſcientious Phyſician.

† See a caſe of the ſame ſort in Dr. Storck's Annus Medicus.

period early enough to procure this great deſideratum in putrid fevers.

Inſtead of repeating what has been ſaid on one of the moſt important of all ſubjects, the procuring of ſleep in fevers, I go on to obſerve what has ſcarcely been taken notice of, or is not commonly known, that in inflammatory ones, whether the ſizy blood has fallen on any particular viſcus, as on the ſide, lungs, liver, inteſtinal canal, or is circulating about in the general habit, as in rheumatic or ardent fevers; taking away blood in a ſufficient quantity at proper intervals, together with ſufficient dilution and an antiphlogiſtic treatment, always procures ſleep ſoon enough to prevent delirium; and that in the true phrenitis or paraphrenitis the above plan will cure it when come on, if ſtrenuouſly practiſed.

Nor muſt I omit to mention, that I had for many years looked in vain for a method of procuring ſleep in fevers of the putrid kind; by which I would here be underſtood to mean fevers from irritation or acrimony, in a greater or leſs degree; but have at laſt the comfort of being able, if called in early, to point out a method that ſeldom fails to procure it. I ſaid, If called in early; for my plan will not anſwer where cordials, broths, and volatiles, have been poured down in the beginning, and bliſters have been applied to almoſt every part of the

body

body at the ſame period. Correctors, but chiefly evacuants of putrid juices, are calculated to produce this bleſſed effect. As for cordial-confection, volatiles, bliſters, broths, mithridate, and the like, I can from my own experience affirm, that they are not: but ſubacid drinks, as barley water with lemon juice, imperiale, lemon, orange, or vinegar whey; ripe fruits, ſtrawberries, gooſeberries, raſpberries, and currants, in ſummer; and in winter, oranges, grapes, and pears, currant jelly, or preſerved fruits, will diſpoſe the patient to ſleep. After the fever is formed, the ſoluble tartar, with manna and tamarinds, or with lemon juice, in a ſufficient doſe to purge three or four times daily, or in a leſs quantity when there is already a diarrhœa,† ſeldom fails to procure, in the courſe of a few nights, enough of ſleep to keep off delirium; will often remove it when already come on, and generally produces that ſort of repoſe which quiets the pulſe, and which is the moſt promiſing mark of recovery that I know, even in the worſt putrid fevers.

In ſuch fevers it is not unuſual for the ſick to become comatoſe with their delirium; a ſymptom that exceedingly alarms the attendants, and often, I wiſh I could not ſay commonly, miſleads the phyſician to apply bliſters, and give ſtimulating medicines, with a view of keeping up the pulſe, as they expreſs it. In this ſtate (where I am

† Formulæ Medicamentorum, No. V. and VI.

led to make a favourable prognoſtic) I have been taught by experience to purſue a very different courſe: for I frequently allow the patient to lie for ſeveral days, perhaps eight or ten, in his delirium, without ever offering to diſturb him, except for the purpoſe of his taking wine whey, panada and ſago with wine, or ſpirit. Minderer. and julep. camph. with a few drops of Hoffman's anodyne liquor, till he obtains natural ſleep, or till the fever has totally left him.

SECTION XX.

BY ABSTINENCE FROM ALL PROMOTERS OF PUTREFACTION, AS FISH, FLESH, VOLATILE SALTS, AND ACRID VEGETABLES.

ABSTINENCE has different meanings in different ſituations, according to the ideas of the patient and of the phyſician, or the cuſtoms of the place or country where a perſon lives. In England it is made to conſiſt, rather too often, in abſtaining from roaſt beef, bacon, and water-fowl; in eating chicken, veal, fiſh, and perhaps mutton.

In France, where Ballonius, Heurnius, and Riverius, formerly practiſed with ſuch ſucceſs, and taught with ſuch ſkill---I ſay in France, where, to be in repute now as a phyſician, you muſt be an adept as a cook, (for bouillons at leaſt) ſtrong

ſtrong ſoups are found at the bedſides of their ſick, even in their hoſpitals : and at Paris, in the Hôtel Dieu, I have ſeen the patients fed with broths between four and five o'clock in the morning, when perhaps the poor people might have repoſed better without them.

In general it is a good rule, that in fevers the patient ſhould take nothing, in the way of food, that requires much coction, or any exertion of the digeſtive powers. Where the juices are already crude, it is manifeſtly improper in a high degree to uſe any thing ſtrong, or hard of digeſtion. As fiſh becomes putrid ſooner than meats, they muſt of courſe be particularly unfit where fleſh meats are ſo, and both together cannot fail of increaſing the putrid diatheſis.

Acrid vegetables have in ſome proportion ſimilar effects, and muſt conſequently be improper under the circumſtances juſt mentioned.

The beſt chymiſts aſſure us, that volatile alcaline ſalts received into the cavities of our veſſels, actuated by vital heat, and circulated by the impetus of the blood, are, from their preying and ſtimulating power, attended with an immediate ſtroke on the nervous ſyſtem, which they throw into yet intenſer action, thereby promoting perſpiration, ſweat, urine, and ſaliva: from whence it follows, that in an alcaline, putrid, or diſſolved ſtate of the humours, or in bodies already too much agitated, they are the worſt of poiſons.---See Boerhaave's Chymiſtry.

I take upon me to ſay therefore, that abſtinence from all ſuch becomes a neceſſary precaution; and that, unleſs the dietetic regimen is altered from its preſent mode in this country, no human art will be found ſufficient to convert putrid fevers into ſafe diſeaſes.

SECTION XXI.

OF THE ABUSE OF BLOOD-LETTING IN PUTRID FEVERS.

THOSE phyſicians, if any ſuch there ſtill are in this country, who think that a part of the cure of every fever muſt neceſſarily conſiſt of Blood-letting, ſhow themſelves to be ignorant of their profeſſion; for the ſymptoms of head-ach, heat, thirſt, or delirium, however ſtrong, do not always require it.

In the hoſpitals of France I have ſeen a fourth or fifth bleeding ordered in the laſt ſtage of fevers with delirium, and a black tongue, and teeth covered with a black tenacious ſlough; in a word, with the pathognomonic ſigns of putrefaction and malignity. A ſpeedy diſſolution was the conſequence, as might naturally be expected.

Bleeding increaſes putrefaction, and weakens the habit, in almoſt every circumſtance where there is no plethora. Blood that looks thin and ſanious ſeldom admits of repeated phlebotomy.

To

To ſay the truth, notwithſtanding the many obſervations recorded by a variety of good writers on the bad effects of this practice in ſome fevers, it is but of late that the fatal tendency of letting too much blood in putrid ones has been properly underſtood or conſidered, and that only by a very few.

In the peripneumonies of December, 1745, Dr. Huxham eſtabliſhed this excellent rule: "If "the blood, having ſtood until cold, appears to "be in too diſſolved a ſtate, and with very "little coheſion, however florid it may be, "ſtop your hand inſtantly, unleſs you would "ſtrangle your patient." He calls this a ſure rule about blood-letting where the caſe is doubtful, pag. 145.

Thus we ſee the abſolute neceſſity of attending to the ſtate of the blood, even in caſes which might be ſuppoſed to proceed from inflammation.

Though I believe it will hold pretty univerſally, that fevers truly putrid may bear one bleeding in habits very plethoric, yet a ſecond or third generally proves deadly, if malignity be the character of the fever, and the particular diſeaſe be either the ulcerated ſore throat, the jail, or petechial fever: nor do I know the ſymptom that can in thoſe caſes juſtify ſuch a practice. I would therefore recommend it particularly to young practitioners, to uſe the utmoſt circumſpection in diſcovering the nature of the fever,

and

and the ſtate of blood, as they would avoid the pain and diſgrace of having miſtaken the caſe, or of having deſtroyed where they were called to ſave.

SECTION XXII.

OF THE ABUSE OF BLISTERS IN FUTRID FEVERS.

IT is really ſhocking to ſee the manner in which the ſick are thrown upon the rack in moſt fevers, by having their heated and agitated bodies almoſt embalmed with Bliſter-plaſters. As I attempted in the Twelfth Section to explain and aſcertain the effects of bliſters, made of cantharides, on our blood in particular ſtates of it, I have only to enter my proteſt againſt their application in every fever with looſe blood and putrid ſymptoms.

SECTION XXIII.

OF THE USE AND ABUSE OF WINE IN FEVERS.

IF it be true that Aſclepiades was the firſt who was enabled to judge with certainty by the pulſe when Wine was proper in fevers, and when not ſo, it is matter of regret, that ſo valuable an art ſhould in a great meaſure have died with him. We find, indeed, the old writers mentioning ſituations in which it was uſeful, and giving directions as to the kind, the quantity,

and

and the times of giving it.† But from the moderns we have not received any rules on this ſubject, that can be deemed ſufficiently full and accurate. Among the ſick in a military hoſpital near Pimblico, of which I had the care for almoſt twenty years, putrid fevers were very common; and they were generally brought under our eye on the firſt, ſecond, and third day of the fever. The patients diet and medicines being entirely under our regulation, their diſeaſes were left to proceed in their natural form: the pulſe was meaſured by the watch, while nothing that could be prevented was allowed to agitate or ſink it, beſides the fever: bliſters were ſeldom applied, or cordial medicines (as they are called) exhibited in a doſe to affect the circulation materially in the putrid fever; and I obſerved, from long experience, that in the Inflammatory ſort no benefit ever accrued from the uſe of wine in any ſhape, or in any quantity, and that even a ſingle glaſs often did apparent miſchief, by increaſing the fever, or retarding the cure.

The caſe, I remarked, was very different in all the ſpecies of Putrid fevers; for, if there was a dejection of mind, or a violent diarrhœa, neither of

† Al. Trallian recommends wine in the cure of the cholera morbus: "Becauſe," ſays he, "it has the power beyond "any thing elſe to refreſh moſt ſpeedily the exhauſted "ſtrength; and I have known many who have, beyond "expectation, eſcaped the danger of dying by drinking it." L. 7. C. de Colera.

of which is uncommon in ſuch fevers, wine mixed with barley water did no hurt, even in the early ſtages of the diſeaſe, (when the pulſe was almoſt always quick;) that is, provided there was no delirium in the firſt attack.

When the pulſe fell below the natural ſtandard, or under ſixty-ſix, red Port wine, to the quantity of two, three, or four glaſſes in the twenty-four hours, was almoſt always of uſe, or at worſt raiſed the pulſe ſo much as immediately to ſhow the impropriety of continuing to give it.

A foul tongue covered with a black ſlime, or attended with tough glare on the teeth, was always found to require it, even where the pulſe was ſo rapid as a hundred and forty, with conſtant delirium, petechiæ, ſyncope, or a total inattention to the paſſing of excrements. I confeſs that I then gave wine, becauſe I knew not any thing better: but where the pulſe had in a putrid fever come down under ſeventy, I never ſaw wine do harm in any ſtate of the brain; it generally did great good, and often wrought like a charm. Perhaps indeed the fever went on for many days longer, till at laſt the patient crept out of it by a continuation of the flux, comatoſe ſleep, or partial ſweats. A glaſs of Sweet wine repeated once or twice is commonly a ſufficient doſe in the twenty-four hours: of Liſbon, old Hock, or Claret, four or five glaſſes; and of Port, Sherry, or Madeira, two or three may be uſed.

In

In general, where wine is indicated, it ſhould be made into what is called Biſhop, or mixed with panada, ſalop, ſago, or barley water; when it often proves a ſedative.

When there was faintneſs, with drought, watchings, a ſmall, irregular, and unequal pulſe, and bilious thin ſtools; or when that faintneſs was occaſioned by crudities in the ſtomach, with a ſlow and ſmall pulſe; Alexander Trallian gave light white wines to help the concoction of the humours, to recruit the ſtrength ſuddenly, and to prevent the fatal effects threatened by its loſs.

SECTION XXIV.

OF THE CURE OF INFLAMMATORY FEVERS IN PARTICULAR.

THE firſt and beſt phyſicians of antiquity have told us, that bleeding and a ſpare diet was the cure for Inflammatory Fevers, and have all united in directing both, in proportion to the ſeverity of the ſymptoms.

Our knowledge of the circulation of the blood, and our ſuperior knowledge of mechanical and chymical principles, ſerve only to increaſe our admiration of their ſagacity and judgement, and to confirm us in the propriety of adopting their method of cure. The fact is, that little new has been diſcovered ſince; and it were well for the cities

cities of London and Weſtminſter if their mode of treatment were more conformable to that of the ancients in inflammatory diſeaſes: ſo many people would not die choaked in their blood; at leaſt, ſo many would not be afflicted with inflammations of the pleura, lungs, and liver, ending in conſumptions or abſceſſes; nor of the brain and bowels, iſſuing in phrenzy and gangrene. To attempt to argue a point ſo clear, would certainly be prepoſterous; and to beſtow much time in explaining why ſuch conſequences follow, would be equally ſuperfluous.

Araeteus and Galen carried the antiphlogiſtic treatment as far as we dare; and if they were ignorant of the attenuating powers of nitre, and a certain degree of heat, they knew however the virtues of oxymel, barley water, and a very ſpare diet, better than they are now generally known.

Even a Sydenham, a Boerhaave, and our moſt illuſtrious moderns, all confirm their doctrines.

Wherever an inflammatory fever declares itſelf, unmixed with bilious or putrid appearances, not affecting any particular viſcus, it requires the moſt ſimple treatment; but where either the brain, lungs, pleura, liver, inteſtines, kidneys, or bladder, become the ſeat of the inflammation, the utmoſt ſkill and care are neceſſary from the very beginning; otherwiſe the fever ſpeedily produces dangerous abſceſſes, gangrene, or death.

There

There is not perhaps a more common error, than the ſuppoſing that emetics, purging medicines, or diaphoretic ones, are of uſe to aſſiſt the paſſage of ſizy blood through the brain, the thorax and its contents, or through the cæliac ſyſtem; or that by increaſing the action of the blood veſſels, which have already thickened the humours too much, they can be diluted and diſſolved while the habit remains too full. It was well remarked, by a maſter of the profeſſion, that thoſe who attempt to puſh unconcocted matter through the veſſels, where there are obſtructions, occaſion a gangrene. Sweats and bliſters are not made uſe of in this ſtate but with the moſt imminent hazard; therefore people ſhould abſtain from all hot ſpices, muſtard, leeks, and onions, in ſuch a caſe.

As the fevers of this ſort certainly require no additional ſtrength, the diet ſhould be thin, at leaſt in the beginning. Where the humours are too thick, abſtinence and blood-letting are preferable to the beſt cordials; and the diet ought to be cooling and ſoftening juices, pulps of fruit, decoctions of vegetables, and of farinaceous ſubſtances.

SECTION XXV.

BY BLOOD-LETTING.

IT was obſerved before, that particular fevers are accompanied with peculiar appearances in the blood, and ſuch as deſerve great attention, becauſe on a proper regard to them very much depends the ſucceſsful treatment of the fevers in queſtion.

But the many circumſtances neceſſary to be conſidered in examining the blood, and aſcertaining the ſtate of both its ſerum and craſſamentum, have, to the unſpeakable misfortune of the Healing Art, made the whole appear an uſeleſs enquiry: and what has tended not a little to diſcredit any indications taken from it (very general ideas excepted) is the opinion of ſome eminent phyſiologiſts, who conſider the blood's having an inflammatory cruſt, or wanting it, as no rule by which to judge of the ſtate of the fluids; becauſe, ſay they, its trickling down the arm inſtead of ſpringing in a ſtream, or its coming away in a ſmaller and feebler one, through the narrowneſs of the orifice, prevents the cruſt from appearing: and in this they follow Dr. Sydenham, by whoſe authority, eminent as he certainly was in a high degree, they are apt to be too much fettered.

There

There is not indeed any poſition, that has tended more than the laſt mentioned to miſlead the phyſicians of this country, who look only for the cruſt, and pay too little if any attention to it, or to the texture, though the latter ought to have a principal influence on the future treatment of the fever. Again, they alledge, that the blood's being received into ſhallow veſſels hinders the buff from ſeparating; that agitating the veſſel while the patient is bleeding, or ſudden cold applied to it, will prevent any ſuch ſeparation from taking place.

As another reaſon why this buffy cruſt does not with them determine the morbid ſtate of the blood, they ſay it appears where the perſon is pregnant, or has had menſtrual obſtructions. But who is ignorant that ſuch obſtructions give the blood a ſizy texture? They are willing indeed to acknowledge, that the appearance of the cruſt ſhows an inflammatory tendency, but deny that it is in a diſeaſed ſtate, even though there be a quantity of cruſt, or that it diſcovers any lentor in the blood; adding, that it is of very little importance in forming any prognoſis about the event, or in pointing out the method of cure in inflammatory fevers.

I hope enough has been ſaid to evince the neceſſity of bleeding, and repeating it at proper intervals, according to the ſymptoms and the ſtrength.

SECTION XXVI.

BY DILUTION.

AS the heat of the fever greatly waſtes the moſt liquid part of our juices, a new ſupply is conſtantly wanted, and the ſecret lies in reſtoring the due quantity. This is not to be effected by pure water, either warm or cold; for that paſſes off by the kidneys, and does not mix kindly with the blood: but if honey, ſugar, ripe fruits, or any farinaceous ſubſtance, be added, and eſpecially if given warm, our juices are then properly diluted.

SECTION XXVII.

BY ANTIPHLOGISTIC DIET.

HAVING ſeen above how largely a proper Diet contributes to the cure of fevers in general, we ſhall find no great difficulty in applying it to the inflammatory ſort in particular, where almoſt the ſole object is the reduction of the ſtrength by the lancet, and by a diet calculated to attenuate thoſe humours which have become too thick and tenacious.

Had the Prince of Phyſic written nothing on any other ſubject in medicine beſides his book on Thin Diet in acute diſeaſes, it would have made

made his name immortal. The moſt penetrating chymiſt of modern times could ſcarcely have deviſed any medicine more diluting for thick humours, or more diſſolving for tenacious ones, than the barley water and oxymel of Hippocrates: with ſuch we might make a tolerable ſhift in fevers even now. Where both are combined, every thing may be expected in the way of abating and diminiſhing the ſymptoms of inflammatory fevers, ſo as to gain that time which we have repreſented as indiſpenſable to their cure, provided always that the lancet's aid is called in where indicated.

Let it be added, that no habits can juſtify the indulging to a regimen that is totally oppoſite to the genius of the diſtemper: but I do not wiſh to reſt a matter of this importance on my own authority. Hear the opinion of the modern Hippocrates, (Sect. 854. p. 142. of Boerhaave's own Commentary, part iv.) "Where the peri-
"pneumony is known, it is curable; but it may
"be made incurable if any coarſe chyle be
"brought into the blood: hence let the ſick
"eat nothing that is thickening or viſcous; to
"wit, neither fleſh, nor eggs, nor milk; only
"the freſheſt new-made whey: in this caſe let
"the food be barley-water, or water-gruel only,
"or butter-milk from which the butter has
"been ſeparated; for much food is not requiſite,
"and the ſick can eaſily hold out with little

" till the ninth day, which is the critical one." One authority more concerning the diet of the ſick, and the danger of neglecting it; that fatal rock on which ſo many patients in inflammatory fevers are daily wrecked. Speaking of the cure of quinzey, Dr. Sydenham has theſe remarkable words: " Meats of every kind, and likewiſe " broths prepared of them, are ſacred, and muſt " not be touched. Let the patient live on barley-" water, water-gruel, and boiled apples; and " let ptiſan and very ſmall beer be his drink." On the cure of the baſtard peripneumony he adds, " In the mean time I forbid my ſick to " touch meats or broths made of them, and " eſpecially every ſort of ſpirituous liquors." But how ſhort is the liſt of phyſicians now-a-days, with whom theſe beſt authorities have any weight!

SECTION XXVIII.

BY ANTIPHLOGISTIC MEDICINES.

WE know how much heat may be allayed, and how much cold may be induced, by nitre and ſal ammoniac. We likewiſe know how wonderfully the Almighty Chymiſt has blended the eſſential ſalts of plants, fruits, and the different parts of vegetables, with their pulpy ſubſtance; how ſtrongly our nature craves them

in

in heated and feverish habits, and how delightfully they soothe it.

We have before hinted what aids our chymists have contrived, where such natural assistance is not at hand, or not in fashion, to dilute and cool our humours by means of neutral salts.

It has been seen likewise, that nitre and the other neutral salts have, besides their attenuating powers, the additional quality of being sedative, and even anodyne. Such are the saline mixture of Riverius, our antiphlogistic drink,* salts of nitre, polychrest, and prunelle, mixed with milk and water, with teas of every sort, or with the testaceous powders. The proportions are so well known, that any further directions must be useless.

SECTION XXIX.

BY BLISTERS.

THERE have been, and always will be, fevers where the blood is thick and glutinous, as those of the rheumatic and inflammatory sort; to dissolve which, after the vessels have been emptied to a proper degree, Blisters are of wonderful efficacy: for, though it must be owned, that during their operation the motion of the arteries is accelerated, yet soon after the pulse is softer and milder in consequence of the

* Formulæ Medicamentorum, No. III.

cantharides having melted the blood and humours. Certain it is, that many eminent phyſicians, and among the reſt Dr. Sydenham, have employed Bliſters with advantage in winter fevers, when the action of the arteries had not power to break down the ſize and texture of the blood without them. They have been applied too by many with ſucceſs in the ſmall-pox, where the hands and feet were not ſufficiently ſwelled, provided at the ſame time that the pulſe was ſlow, and the patient rather heavy than otherwiſe.

In fine, where the circulation is languid and feeble, as frequently happens in the end of inflammatory fevers when the blood is not enough diſſolved, they prove as uſeful as they are the reverſe when the pulſe is quick and vigorous, or the juices are putrid.

In cold affections, when the head is violently attacked, Mercurialis recommends Bliſters applied to the feet, in preference to any other part of the body.

The beſt epiſpaſtic is warm water, and the ſtrongeſt is the vapour of warm water, which laſt is indeed of incredible efficacy.

Sinapiſms with vinegar, leaven, &c. have always been uſed with ſucceſs in putrid fevers, their antiſeptic virtues correcting the putrid diatheſis, agreeable to the teſtimony of the beſt writers.

Nor do we diſpute the good effects of making a revulſion by means of bliſters in a variety of caſes, provided they are adapted to the ſtate of the juices at the time; particularly when there are bad humours floating about through the internal parts of the body: ſuch applications may ſerve to draw them outwards. Let it however be ſtill remembered, that ſtimulating ſubſtances, when they do not remove the obſtruction, increaſe the inflammation; and that they do not remove the obſtruction, unleſs when the veſſels have been previouſly emptied, and where volatile ſalts may be indicated as able to remove them: for example, in inflammatory rheumatiſms, and pleuritic complaints towards the end of the diſeaſe.

SECTION XXX.

RECAPITULATION.

FROM what has been advanced it appears, that moſt fevers are efforts of the conſtitution to get rid of what offends in different ways, according as this has been accumulated by different cauſes, and is in a diſpoſition to be carried off; that the beſt phyſicians, conſidering fevers in this light, have attended chiefly to the means of reducing or ſupporting the ſtrength of the patient as nature indicated; that when the bile, inſtead of flowing into the inteſtines, has been

been regurgitated, and mixed with the blood more or leſs intimately, from obſtructed perſpiration, damp or over-heated air, too thin cloathing, affections of the mind, too little repoſe, a bad ſituation or climate, the conſequences are bilious diſorders, hoſpital, camp, jail, putrid, petechial, malignant, and peſtilential fevers, in proportion to the combination of circumſtances; and that the ſame general indication of correcting, and conveying off when corrected, ſo material a cauſe, is the direct road to a cure. We have ſhown how this is to be attempted with the greateſt probability of ſucceſs.

It farther appears, that the proceſs for correcting and curing fevers from a bilious or contaminated ſtate of juices being leſs underſtood, and more complex, according to circumſtances of the ſeaſon, climate, quality of the juices, and management of the fever in its beginning, the duration of ſuch fevers muſt be more tedious, and their iſſue in common hands more uncertain; that ſizy or too compact blood, whether ariſing from mere plethora, or produced by too cold air, too ſtrict a habit, too thin cloathing, too thick food, exceſſive fatigue, want of exerciſe, and proper dilution, is the leading cauſe of inflammatory fevers, as ſuch blood, by circulating through the general ſyſtem of blood veſſels, or preſſing particularly on the pleura, lungs, diaphragm, or any of the cæliac viſcera, produces rheumatic, pleuritic,

pulmonic,

pulmonic, phrenitic, hepatic, or inteſtinal fevers; and that weakening the tone of the veſſels, diminiſhing the quantity of circulating fluids by bleeding, diluting the remainder with warm water, frumentaceous, vegetable, ſaline, and ſaponaceous liquors, and giving the neceſſary aſſiſtance by laying the ſolids at reſt as much as poſſible in a proper and temperate air, conſtitute the natural proceſs for the cure of inflammatory fevers; a proceſs almoſt always ſucceſsful, if properly purſued and ſufficiently extended; and finally, that inflammatory fevers being on theſe accounts leſs complex in their nature, and conſequently more under the power of regulation, the times of their duration and their criſes are better aſcertained.

SECTION XXXI.

OF THE PREVENTION OF FEVERS.

THE peaſants of England are in the habit of letting blood and taking phyſic every ſpring, and many of them likewiſe in the autumnal ſeaſon. This would not be a bad rule if it was not too general: for ſo far as their peculiar circumſtances of life ſubject them to the danger of fizy blood, that evacuation, which enables the arterial ſyſtem to deſtroy by breaking down the too viſcid texture of the blood, muſt, no doubt, contribute

contribute much to prevent plethoric and inflammatory fevers.

For Preventing Inflammatory Fevers I would obſerve, that beſides venæſection, where there are evident marks of plethora, the blood and other juices of our body ſhould be diluted with ſmall liquors much more than is commonly practiſed; that greater care ſhould be taken to have ſmall-beer in ſuch a ſtate of purity and freſhneſs, as may tempt us to make more uſe of it in the midſt of our ſolid meals; that a larger proportion of thin attenuating liquors ſhould be mixed with our food in the time of eating than is uſual, much depending on the blood's having a ſufficient quantity of ſerum; and that porter, ales, and wines, ſhould not be drank till ſmall liquors have preceded: in ſhort, that the French manner of living, with regard to diet and drink, ſhould be more generally adopted; I mean, that broths, vegetables, baked fruits, water, &c. ſhould be much uſed. To all which I add, that the people of this country ſhould be clad more like thoſe of Holland, who leave not off their winter cloaths till Midſummer-day, and put them on again the day after; and alſo that every interruption to the digeſtion, by leaning forward on deſks, by ſtudying too ſeverely, or by writing immediately after a plentiful dinner, ſhould be carefully avoided. If ill ſucceſs, domeſtic troubles, or other cauſes, have worn the mind, and vitiated the juices, that kind

of

of phyſic or purging medicine which carries off the morbid fomes from the inteſtines, by entering the cæliac or meſenteric ſyſtems, and mending the juices there, will ſerve to prevent ſuch an accumulation of matter as would finally produce the worſt ſpecies of putrid fevers.

To ward off both Bilious and Putrid fevers it is of importance to abſtain, eſpecially during hot weather and ſoutherly winds, from meat, fiſh, and all ſorts of wild and water fowl that has been long kept, or at leaſt to temper them with acids in ſuch a manner as to counterwork their natural tendency to render our juices putrid.

For the ſame purpoſe, the fruits of the ſeaſon, as currants, cherries, and gooſeberries, which every one can partake of, ſhould be moderately uſed, together with oranges and preſerved fruits where they can be obtained. Not to diſguiſe the truth, unleſs the preſent mode of late hours and unequal cloathing is given up, the inhabitants of London will be as ill able to bear the want of oranges, lemons, citrons, ſpiceries, &c. as the inhabitants of the Torrid Zone could exiſt without the correcting acidity and reviving fragrance of thoſe productions.

If, notwithſtanding a general attention to health, any perſon ſhall find his ſpirits become low, his head ache, his tongue feel parched, with the edges of it as if touched by a live coal, and his mind fall on the moſt diſagreeable circumſtances with which he is acquainted, his ſleep become interrupted,

interrupted, or his fancy harraſſed with uncomfortable dreams, he has reaſon to ſuſpect that a putrid fever is ready to break out on the leaſt irregularity, more ſimple or more complicated according as the body is more or leſs foul, the infection more or leſs active, or the houſe or place he inhabits loaded in a greater or leſs proportion with putrid effluvia. Againſt ſuch impending miſchief we preſume, with a confidence inſpired by proofs innumerable, to recommend our Prophylactic Powder* as the beſt preſervative which modern times have produced.

To conclude, it will be allowed, that the man whoſe body is clear from every noxious humour is in no danger of contracting any illneſs, except from external violence or infection; but we aſk with Galen, Why may not proper care be taken to keep the body clear from all ſuch noxious humours?

* See our Formulæ Medicamentorum, No. X.

APPEN-

APPENDIX,

ON THE

HECTIC FEVER

AND THE

ULCERATED AND MALIGNANT

SORE-THROAT;

WITH AN

INTRODUCTION.

APPENDIX.

INTRODUCTION.

HAVING in the foregoing Enquiry endeavoured to eſtabliſh the propriety of dividing all fevers into Putrid and Inflammatory, or a Mixture of both, and to give an account of the ſeveral cauſes, diſtinguiſhing characters, and different treatment of the Putrid and Inflammatory ſpecies, it may not be improper to attempt a further illuſtration of our ſubject by ſelecting an example of each, and trying, from the teſtimony of the beſt writers, whether the plan above propoſed, of an antiſeptic treatment throughout in the Ulcerated and Malignant Sore-throats, and of one as truly antiphlogiſtic in the Inflammatory Hectic Fever, does not offer the greateſt probability of ſucceſs.

I have choſen the Ulcerated and Malignant Sore-throat as examples of the firſt, and the Hectic Fever as an inſtance of the laſt ſort, for the following reaſons:

Firſt, Becauſe, notwithſtanding the many uſeful lights that have been thrown upon this ſubject by the writers of the laſt age in Spain

and Italy, and by two of our own moſt eminent phyſicians, particularly Dr. Fothergill, the diſeaſe ſtill continues to make a havock ſo conſiderable, as to keep up the alarm about it both in the metropolis and all over England.

Secondly, Becauſe, during a courſe of eighteen or nineteen years in a military hoſpital of which I had the charge, I never loſt a patient by this diſeaſe, as my aſſiſtants can teſtify, though the nature of the ſervice ſubjected the ſoldiery very much to putrid complaints, and many adults had the putrid ſore-throat in its worſt form.

Thirdly, Becauſe, in an extenſive private practice for yet a longer period, I never witneſſed its fatal effects, excepting in two inſtances: *

The late A—— D———d eſquire's old ſervant, of a very ſcorbutic and rather groſs habit, had the malignant ſore-throat with its worſt ſymptoms; on which account, for three days before I ſaw him, he had taken Peruvian bark, cordial-confection, and opiates in abundance, beſides two bottles of Port wine, and nearly a pint of brandy daily, as I was informed by thoſe about him: I found him delirious, with his looſeneſs ſtopped, and in the agonies of death, which happened a few hours afterwards.

The

* When the above was written, I had not ſeen its fatal effects in two children, of a noble family, a few miles weſt from London.

The other caſe was of a young gentleman about five or ſix years old, where the diſeaſe was next to peſtilential; for every part of the body that bore its own weight gangrened, as well as the orifices where he had been blooded twice before I ſaw him (which was three days after the ſeizure); the parotid glands were very much ſwelled, the whole body was more or leſs œdematous, and the ſkin throughout of an eryſipelatous purple: he died the third day after I ſaw him.

I have pitched on the Hectic fever, becauſe I know that it has proved deſtructive to great numbers of boys and young men, eſpecially in this crowded city, from their having not been treated according to the beſt antiphlogiſtic regimen, as well as diet, unleſs by a few phyſicians, who (I mention it with regret) have been condemned by the many for preſuming to make the diet of their patients as antiphlogiſtic as they made the treatment; and I hope to ſhow, that many have been ſaved in this way, who, but for ſo ſevere a regimen, muſt have long ago been numbered with their fathers.

ON THE

HECTIC FEVER.

NOTHING can be more erroneous than the idea which generally prevails, That where the fleſh is waſted, or the habit reduced, the caſe is always conſumptive: for when a Putrid, or a Rheumatic fever has laſted a conſiderable time, as frequently happens, and has been treated according to the beſt rules, the fleſh ſhall be gone to appearance, though the diſeaſe is conquered, and the patient in ſafety.

The true pthiſis, or conſumption, is a very common diſeaſe in Great Britain, deſtroying perhaps a tenth part of thoſe who die of what are called Chronical diſtempers.

It is not my intention at preſent to conſider the ſorts that are the conſequence of inflammations in the ſide or lungs, or that are owing to external accidents, or that ſucceed a ſpitting of blood, with which laſt ſymptom very many conſumptive caſes begin.

I mean only to diſtinguiſh from the reſt that ſpecies which is called the Hectic Fever, and to evince, what is by no means a common opinion, how very much it is within the reach of art,

if

if not hereditary, and if treated on a plan thoroughly antiphlogiſtic; a plan indeed, to which it is not eaſy in England to reconcile either the patient or his friends: nor, to ſpeak the truth, are the generality of phyſicians fond of purſuing it; ſo far otherwiſe, that many of them affect to treat with deriſion this method of cure, which alone ſeems adequate to the violence of the diſeaſe, and without which the lungs become finally touched in a fatal manner.

We have already ſeen, that the beſt profeſſors of the art, both ancient and modern, believed a fever to be often neceſſary for the ſeparation of the impure part of our juices from the pure, and conſequently neceſſary in many caſes for the welfare of the body: but while this is admitted, it muſt likewiſe be owned, that a fever is the cauſe of many diſeaſes, and frequently of death. The wiſeſt practitioners, from a knowledge of theſe circumſtances, have learned to be very cautious in their treatment of fevers, and to obſerve what are the ſorts which on the one hand, by being cheriſhed, are uſeful to the habit (as the general claſs of Intermittent and Depuratory fevers are) or on the other hand, if not reſtrained and conquered, produce the worſt effects. Accordingly they diſcovered, that the kind of fever which was attended with an unnatural heat and too quick a pulſe, laſting for many weeks, perhaps months, and ſhewing evident marks of obſtructions

in the lungs, was a very dangerous one; and they called it Hectic. It was called ſo by Galen from its ſimilitude to itſelf, without any feveriſh paroxyſms, without increaſe, height, or remiſſion, ſo that the patient was not ſenſible of his being ſeized with the fever. It was obſerved indeed, that it had a periodical increaſe, not from the Hectic itſelf, which always goes on with an equal tenor, but from the nouriſhment taken in, which, when digeſted and diſtributed, allowed the diſeaſe to return to its former ſtate.

To make the doctrine which I wiſh to eſtabliſh more intelligible, it is neceſſary to ſay ſomething of the ſtructure of the lungs, which are generally known to be divided into two parts. "Each "part," ſays the moſt eminent Anatomiſt of this age,* "is quite a diſtinct maſs; there is no "continuity of ſubſtance between them, unleſs by "the trunk of the great veſſels which go into "each. The lungs ſerve for two great purpoſes; "firſt, the circulation of blood; ſecondly, the cir- "culation of air, or the paſſage of the air into "the lungs and out again: therefore they are "compounded of arteries and veins like other "parts, but have alſo a ſyſtem of veſſels (air "veſſels) which is peculiar to this part of the "body: all theſe veſſels enter the lungs in the "middle of the inſide of each lobe. The great "blood veſſels come to them from the baſis of "the

* Dr. William Hunter's MS. Lect. anno 1770.

" the heart. The lungs do not, like the other " parts of the body, receive a portion of blood " for ſecretion or nouriſhment; but they receive " all the blood which goes through the whole " body. This viſcus has alſo a farther peculiarity, " that, beſides receiving the blood which goes " through the whole body from the heart, each " lung has an artery from the aorta, and a vein " from the vena cava or azygos; ſo that this is " another ſyſtem of veſſels ſerving them for " nutrition. The blood brought to the lungs by " the pulmonary artery is not good blood; it " is that which has already been thrown over " all the body for the purpoſes of nouriſhment " and ſecretion, and it muſt paſs through the " lungs to be ſome-how changed there before " it becomes fit for nouriſhment; therefore the " lungs muſt be nouriſhed by ſome good blood " from the aorta, which had already paſſed through " them. They have alſo lymphatic veſſels about " their root, which are commonly a number of " lymphatic glands. There are likewiſe a great " many of the ſame ſort of glands, but ſmaller, " diſperſed through the ſubſtance of the lungs, " which are of a blacker colour than the lym- " phatic glands in the other parts of the body."

The neceſſity of this long quotation will appear, when it is conſidered that the food which we take into our ſtomach, after being mixed with the ſalivary and gaſtric juices, paſſes through

the pylorus or lower orifice of the ſtomach into the duodenum, where, impregnated with the bile and pancreatic juice, it is rendered more fit for having the chyle ſeparated from it by the remaining powers of digeſtion, when it deſcends into the inteſtines.

In proportion as the chylopoetic viſcera are more or leſs ſtrong, that chyle will be more or leſs pure. Anatomy has likewiſe taught us, that the chyle is poured by the left ſubclavian vein through the right ventricle of the heart into the lungs, to be there wrought into a more perfect ſtate. The lungs then being the viſcus where the new nouriſhment is to be turned into blood, and where that which has performed the whole round of the circulation is alſo to be rectified for the further purpoſes of life, they muſt neceſſarily undergo the ſevereſt labour. It is eaſy to ſee that they muſt ſuffer in proportion. Such bad effects will be peculiarly felt in London, where ſo many things contribute to render the ſanguification imperfect; among the reſt, that particular deficiency in the air, which ariſes from its pabulum being conſumed by the multitudes that breathe in it, and which prevents the lungs from performing their office with the ſame freedom.

It is the obſervation of one of the beſt writers (Bennet's Theatr. Tabid. p. 100.) that high living and good fellowſhip are very apt to bring on conſumptive complaints, eſpecially in thoſe who have

have not bile ſeparated in due proportion to the quantity of their juices; and where there is an abundance of humours, they muſt become acrid in the ſame degree as the ſolids want exerciſe to throw off ſuch ſuperfluities, particularly if the ſeaſon to coldneſs or moiſture join an unnatural inclemency.

Foods of a groſſer and glutinous quality (and ſuch both art and nature contribute to render moſt of the foods of the ſouthern part of this iſland) are not, in delicate habits, reducible to a ſtate of ſufficient tenuity, or fineneſs. The diſorders that are ſo common in this enormous city will naturally fall with uncommon weight upon the lungs, and produce crude and acrid humours, ſuch as catarrhal complaints, coughs, ſpittings of blood, in the firſt inſtance; and in the ſecond, hectic fevers, obſtructions, inflammations, tubercles, and collections of matter.

Add to all this, beſides an hereditary temperament, the time of life and the prediſpoſing cauſes of acrimonious blood, a delicate ſyſtem of blood veſſels, violent emotions of body and mind, heightened by natural diſcharges being any-how checked, obſtructed menſtrua, lochial fluxes ſuddenly ſtopped, or by habitual hæmorrhages, piles, or iſſues ceaſing, &c.

An imperfect chylification in the cæliac ſyſtem, ſo general an attendant of ſcrophulous habits, tends very much to aggravate ſtationary complaints

plaints in the lungs. When therefore young people of ſuch a conſtitution exchange the pure and elaſtic air of the hills, for the damp, foul, and relaxed atmoſphere of cities, ſacrificing the health derived from their mother's milk, and ſober fare, to a life of confinement, with boiled beef and buttered cakes, at boarding-ſchools, or in compting-houſes; or when young artificers come to labour as carpenters, maſons, &c. in damp houſes or new walls, in open doors and windows, and to live upon the coarſe meats and ſtrong drinks of this irregular town; who can wonder if ſizy blood, and infarctions of all the viſcera, are the conſequence? What completes the miſchief to ſociety, is that the progeny of theſe people are as unſkilfully treated, and as groſsly fed, as their parents: hence the tun-bellies, ricketty joints, and crooked limbs, of thoſe children whoſe great-grandfathers were ſtrangers to ſuch a life, and who could boaſt, that their immediate deſcendants were able to ſtand upright, and ſtep forward with ſpirit!

Again, is it ſurpriſing that checked perſpiration, late hours, thin cloathing, and the gratification of every reſtleſs and immoderate paſſion, ſhould load the veſſels of the lungs and meſentery with ſizy blood and ſcrophulous obſtructions; or that bad coughs, night ſweats, and a Hectic fever, ſhould enſue? Can any be at a loſs to foretell the fatal tendency of ſuch diſorders, eſpecially where

where almoſt every man's ſon, brother, or neighbour, is melting and dying away with the ſame complaint, from an inability in the abſorbent veſſels, weakened as they are, to tranſmit chyle from ſuch coarſe materials, in a pure ſtate, to its receptacle?

From what has been ſuggeſted, I doubt not but every man of ſenſe will ſee the neceſſity of that mode of cure which I took up my pen to recommend, namely, a diſcharge of blood in this ſtate from the veins by the lancet, a diet that will give no additional labour to the chylopoetic viſcera, a purer air, and a clearer ſky; and in particular caſes, at the bad ſeaſon, a flight to ſome climate where there is a more temperate winter, joined to a ſtile of exerciſe, as well as temperance, very different from the uſual management. I have frequently ſeen the neceſſity of quitting London air, to temper the heat and compoſe the hurry of the circulation, where a Hectic fever had continued for five or ſix weeks in deſpite of the beſt medicated regimen; and oftener than once I have known the patient return to town in twenty-four hours as free from both, as if neither had formerly exiſted. I have likewiſe ſeen the moſt ſtubborn infidels on this ſubject reduced to the neceſſity of ſubmitting to a diet of whey, milk-porridge, water-gruel, fruits, or farinaceous foods, when, in compenſation for a penance which they thought

ſo

ſo dreadful, they received back their ſpirits, their lungs, and their conſtitutions; and I have known many, who had been given over by their anxious friends on account of Hectic complaints, recovered by ſo ſevere a regimen, as only tended to complete the triumph of their phyſicians.

Having already demonſtrated that the lungs muſt be expoſed to harder labour, and of courſe to greater danger, than any of the other viſcera, where the air we breathe, and the diet we uſe, contribute to it ſo largely; I flatter myſelf that every intelligent perſon muſt be convinced how unfit thick, tough, inflammatory, coarſe, and often acrimonious blood neceſſarily becomes to paſs through the pulmonary ſyſtem, without that ſort of repeated exertion which we call a Cough, and without the further ſtruggle of a Hectic fever; both which united naturally produce a night ſweat, that enables the habit to renew the conflict with nutritive foods, and the very improper chyle which theſe furniſh, the following day and night, and ſo to hold out a while longer. If then we are once ſufficiently acquainted with the nature of ſuch a diſeaſe, and are at the ſame time in poſſeſſion of a rule to judge, that moſt probably no ulceration in the lungs has taken place, we can join our opinion with that of an admired author on this ſubject, "Quod nil peſtiferum eſt modo pul-"mones non exulcerat;" and that the cure is

ſtill

ſtill in our own hands, which is what I wiſh to prove.

Whether I have addreſſed the underſtanding of my readers with ſufficient evidence to prevail on the inhabitants of this town, where the miſſing of a meal is become an intolerable grievance, to adopt my plan, is another queſtion; but that affects not in the leaſt my doctrine, which is, that in general (I do not ſay always) the blood may be reſtored to a healthy ſtate by proper bleedings and a very ſevere antiphlogiſtic diet; that by theſe means the Hectic, which I have deſcribed, may be, and often is cured, and a further progreſs to a deep conſumption ſtopped; that many young gentlemen, of great hopes to their parents and their country, (for it is among fair-complexioned men with tender lungs that genius and ſpirit is moſt frequently found in northern climates, while various circumſtances happen to make ſuch ſcrophulous) and alſo many of the moſt induſtrious young artificers, whoſe ambition hurries them into this mart of wealth and reputation, may be ſaved from too early a fate. I even go ſo far as to aſſert, that there are at preſent alive in London and Weſtminſter above an hundred ſuch, who by the means we propoſe have been reſtored to perfect health from this Hectic, of which there is not now the leaſt mark remaining.

What

What I would propoſe then is, that blood ſhould be drawn away two, three, four, or five ounces at a time, according to ſtrength and circumſtances, particularly the ſizineſs of the blood; that meat and every thing made of it, fiſh and every thing made of them, and all ſpirituous and fermented liquors, diluted or otherwiſe, excepting ſmall-beer, ſhould be given up at once; that cows milk diluted according to its thickneſs, or butter-milk, as it is called, from which the butter has been ſeparated while the milk is new, milk or rennet whey, aſſes milk, barley-water, well-baked bread, all fruits and vegetables while full of their eſſential ſalts or neutral ones, the ſummer fruits, ſtrawberries, gooſeberries, cherries, &c. and oranges, lemons, grapes, apples, and pears in winter, colleyflowers, broccoli, and turneps, and ſometimes potatoes, ſhould be the food of the hectic patient; that he ſhould retire from labour, buſineſs, books, anxiety, the compting-houſe, and the foul air of London; and when the veins are ſufficiently emptied to allow of it, exerciſe on horſeback or in a carriage, according to his ſtrength and circumſtances, ſhould be practiſed. By following this plan the Hectic fever, the cough, the night ſweats, ſhall often diſappear, and health and vigor be regained. I muſt mention with regret, that after parents have had the good ſenſe to fall in with ſuch meaſures for a conſiderable

ſpace,

ſpace, and with great advantage to their ſick, I have often ſeen their reſolution fail them, becauſe they obſerved the patients tremble and ſtagger, from what they called being ſtarved to death, at the very time that the pulſe was becoming unequal and ſlower, and the inflammation was therefore juſt about to ceaſe.

I ſpeak within the bounds of truth when, judging from the bills of mortality, and the numbers in ſuch circumſtances who have been brought to my door ſince the year 1750, I aſſert, that there muſt be very near twenty thouſand children in the cities of London and Weſtminſter, and their ſuburbs,* ill at this moment of the Hectic fever, attended with tun-bellies, ſwelled wriſts and ancles, or crooked limbs, owing to the impure air which they breathe, the improper food on which they live, or the improper manner in which their fond parents or nurſes rear them up: for they live in hot bed-chambers or nurſeries; they are fed even on meat before they have got their teeth, and what is, if poſſible, ſtill worſe, on biſcuits not fermented, or buttered rolls, or tough muffins floated in oiled butter, or calves-feet jellies, or ſtrong broths, yet more calculated to load all their powers of digeſtion; or are totally neglected.

How

* If this be queſtioned, examine the public charity-ſchools and workhouſes, the purlieus of St. Giles's and Drury-lane, and ſatisfy yourſelves.

How much preferable were the raſpings of French bread, the bottom cruſt of well-fermented and well-baked loaves, mixed with a little milk, or now and then with broth clear of fat and greaſe!

When by ſuch irregularities matters have come to the ſtate I have deſcribed, the Antiphlogiſtic powder, which I have likewiſe called the Antirachitic powder, will reduce and remove the Hectic fever, the hard and ſwelled belly, or fit the ricketty patient for the cold bath; that ſovereign cure for the large joints, and weak or even crooked limbs, of children bred and nurſed in London air, the very bane of infants upon the breaſt, and of children in general, but which cannot be made uſe of while the belly remains large.

ON THE

ULCERATED AND MALIGNANT

SORE-THROAT.

IT is not above forty years ſince this country has been viſited by the Ulcerated and Malignant Sore-throat, or at leaſt become acquainted with them; though both kinds are now very common, perhaps more ſo than they were in Spain or Italy in the preceding century.

Soon after the appearance of this diſeaſe here, its putrid nature came to be ſuſpected by a few phyſicians, and its diſtinguiſhing ſymptoms have been deſcribed with great accuracy by Dr. Fothergill.

The late Dr. Huxham, of Plymouth, likewiſe favoured us with his experience, and many uſeful obſervations on the ſubject. Their works are well known.

The alarm which the ſmall-pox was wont to ſpread in this iſland, but eſpecially in the ſouthern part of it, wherever it appeared, is freſh in every body's memory: indeed it is only within theſe few years that Sutton's method (and he is fully entitled to the honour of it) quieted the minds of the people, by convincing them of its

not being ſo frightful a malady under proper management. And of what, after all, does this management conſiſt? Of freſh air, light foods, fruits, frumentaceous ſubſtances, vegetables, antiſeptic and antiphlogiſtic diet, and proper purging phyſic.

The ſucceſs of Sutton's method, in the cure of the ſmall-pox, confirmed me in the belief, that whatever corrected the humours, and cleared the body moſt effectually of putrid materials, gave the beſt title to ſucceſs in this diſeaſe, for theſe reaſons: Becauſe its appearances throughout were ſo remarkably putrid; becauſe it was generated or communicated (no matter which) by foul or infectious air; becauſe it was moſt prevalent in the beginning of winter; becauſe it was more fatal in low and damp ſituations; becauſe it was fed by looſe and putrid blood, as it was of a bilious nature in all its ſymptoms; and becauſe it was rendered more dangerous by impure and putrid foods, and increaſed in its violence by imperfect perſpiration, and thin cloathing, as well as moſt common in relaxed and delicate habits.

To ſhow more diſtinctly in how many inſtances we are alarmed about the Ulcerated Sore-throat without ſufficient ground, and, even where it is malignant in its nature, how ſpeedily that treatment, which is found to be moſt proper in putrid fevers, changes the appearances, and ren-

ders

ders the diſeaſe leſs dangerous and leſs fatal, being the object of this article, I proceed to divide it into two ſorts, the Ulcerated and Malignant; becauſe, though the ulceration in the throat is very nearly ſimilar in both, and even correſponds in ſome of the ſymptoms, yet it differs exceedingly in others, eſpecially in the degree of danger; the laſt requiring, from the ver firſt ſeizure, the ſtrongeſt antiſeptics, no leſs than the ſtricteſt attention.

Every appearance proves that both ſorts are putrid and infectious, communicating each the other. At a gentleman's houſe in Iſlington the worſt ſymptoms of the Malignant were to be ſeen in his children, while only the Ulcerous prevailed among his maid-ſervants; and the ſpecies that was attended with two or three days ſickneſs, with the greateſt dejection of ſpirits, both the ſcarlet and miliary eruption (the laſt ſort of eruption ſeldom ſhows itſelf till the fifth or ſixth day) produced only the common ſort in the maid-ſervants who attended. At the ſame houſe, in one Lady of nineteen or twenty, the diſeaſe returned a ſecond time, three or four days after ſhe had a complete criſis to the firſt; but this is the only inſtance in which I have obſerved a ſecond ſeizure from the ſame infection.

One would imagine, that a diſeaſe ſo evidently putrid would ſecure againſt a ſtate of juices truly inflammatory; and yet the meaſles were

caught in a few days by a child of ſix or ſeven years old, juſt eſcaped from the Malignant Sore-throat, where four or five bleedings were neceſſary to ſave the lungs from peripneumony and ulceration, and where the blood was ſizy in an extreme degree. Such is the power of that inviſible thing called Infection, and ſuch the difference between the ſtate of our juices in putrid and inflammatory fevers.

SECTION I.

ON THE ULCERATED SORE-THROAT.

THE Ulcerated Sore-throat ſhows its approach by a pain in the throat on ſwallowing the ſpittle, which is followed by a chilline ſs of longer or ſhorter duration, with pain in the back and limbs, as in the acceſſion of any common fever, attended with a conſiderable depreſſion of ſpirits, and a ſort of head-ach which ſeldom fails to attend putrid fevers, and which I cannot compare to any thing ſo well as the head-ach that one often feels who has been long in a crowded play-houſe or public aſſembly. Theſe two laſt ſymptoms mark the diſeaſe, even before the ulceration is diſcoverable in the throat, and ought to put the phyſician on his guard as to the nature of the complaint. Within eight or ten hours after the ſeizure, a greater or leſs

degree

degree of ulceration is diſcoverable in the tonſils, reſembling ſometimes the confluent ſmall-pox before maturation, and ſeated in the middle of the tonſil only; ſometimes a foul ſlough covers the whole tonſil, attended with more pain than difficulty in ſwallowing: a fullneſs may likewiſe be felt externally on the ſides of the throat, where the tonſils are ſituated, and tender to the touch.

Where this particular ſpecies of infection finds the body ſtrong, the ſtamina good, the ſtomach and inteſtines not much loaded, the cæliac and chylopoetic ſyſtem free from material obſtructions or cacochymy, the air healthful, the ſeaſon unfavourable to putrefaction as in the end of winter and ſpring too, the barometer high, the ſituation not too low, the foods not too coarſe, the cloathing not too thin, and without any preceding great irregularities in diet, or by ſitting up in infected or foul air, and crowded aſſemblies; under theſe circumſtances I ſhould expect the Ulcerated Sore-throat only as above delineated, without malignity, and the patient diſpoſed to fall into eaſy relieving ſweats, a ſpeedy diminution of the depreſſion of ſpirits, and of the head-ach and pains, with a perfect ſediment in the water, in a ſhorter ſpace of time than in any other continued fever known to the ancients, or to us; I mean, within four days.

The cure depends on correcting the juices by our First and Second Formula, on keeping the body open with the Fourth or Fifth, supporting the ſtrength with the Eighth or Ninth, and promoting a diaphoreſis by the Seventh; and, if animal foods cannot be diſpenſed with, by mixing a ſufficient quantity of acid (as lemon juice or vinegar) with broths made of new-killed meat, or of fowls fed on grain: mean time the parts affected ſhould often be touched with mel roſe acidulated with ſpirit of ſea ſalt, twenty drops of the laſt to about an ounce of the firſt; or at leaſt the tonſils and throat ſhould be gargled with the above, moderately diluted by barley-water or ſage-tea, until the ulceration diſappears.

SECTION II.

ON THE MALIGNANT SORE-THROAT.

IF the ſpecies of Putrid Sore-throat, which we now proceed to deſcribe, continued to appear with as mild an aſpect, and proved as ſeldom fatal here, or in the country of England, as it was repreſented to have done in 1769 in the cities of London and Weſtminſter, or in the neighbouring villages, it would ceaſe to deſerve the character of Malignant, and ſcarce require any further attempts to render it more mild, or leſs fatal.

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But having ſeen it in ſo bad a form, within theſe twelve months, as to comprehend all the ſymptoms which are conſidered as characters of the moſt Malignant fevers, with the additional circumſtance of appearing in very high ſituations, as at Harrow on the Hill; and at a ſeaſon of the year (in the months of June and July) when putrid fevers are ſcarcely ſet in; I hope it will not be conſidered as preſumption in me, where my ſubject naturally leads to give a particular example of a putrid fever, if I make a few remarks on the preſent mode of practice in ſuch a complaint, and affirm, that until a plan more exquiſitely antiſeptic be purſued, it muſt continue to alarm the public with too much reaſon.

I cannot refrain from obſerving, that a ſort of fatality has attended the treatment of diſeaſes termed Malignant; I mean the general belief, that medicines called Alexipharmac, or Cordial, are alone able to overcome malignity, in whatever ſhape it may appear. Upon what principles of philoſophy or chymiſtry thoſe practitioners proceed, who have adopted ſuch ideas, they beſt can tell: that they continue to entertain them againſt the evidence of the moſt glaring facts, beſides the want of ſucceſs in many inſtances, is what gives me moſt concern, and will, I doubt not, with candid minds exculpate me, not only for the ſtrictures I have made on the pre-

ſent method of treating putrid fevers in general, but alſo for any I ſhall make on the uſual management of the Malignant Sore-throat in ſeveral important particulars; and the rather, as I perſuade myſelf they will ſee how much I am diſpoſed to fall in with their ideas where they are eſtabliſhed on ſolid principles, and where manifeſt ſucceſs, as well as ſound phyſiology, give a ſanction to their utility.

Before we proceed to the cure, let us ſee what are the ſymptoms which mark its nature, that we may judge from them, and the other morbid appearances, what probability there is of the indications of cure being fully anſwered by that antiſeptic plan which we eſpouſe ſo confidently, and which we recommend ſo warmly.

It is really curious to obſerve, that almoſt every ſymptom of every ſpecies of putrid fever, from the Bilious to the Malignant (I had almoſt ſaid, to the Peſtilential) accompanies one degree or other of this Putrid Sore-throat; on which account, among others, much may be learned by an accurate attention to all its ſymptoms.

We have found the ulcerated ſort announcing its near approach by head-ach, languor, greater or leſs depreſſion of ſpirits, with a foreneſs in the throat, followed by the hot and cold fit, ulceration in the tonſils, &c.

We ſhall find the Malignant ſpecies coming on with a hoſt of formidable ſymptoms; for all

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at once the infected perſon turns pale and looks like a corpſe, is taken with ſuch a giddineſs of the head as precedes faintneſs, grows ſick, vomits or purges, is ſeized with violent head-ach, depreſſion of ſpirits, and a ſhivering fit; all which ſucceed one another in the ſpace of a few hours, along with redneſs and ſwelling in the face, and with an inflammation and waterineſs in the eyes, as in the meaſles. By this time he can no longer ſtand; nay, ſeems ready to die away with debility and faintneſs; and an eryſipelatous redneſs diſcovers itſelf in the fauces, with ulceration and ſlough. In ſuch circumſtances the nature of the diſeaſe can ſcarcely be miſtaken, as every concomitant ſymptom ſhows it to be a fever of the putrid kind, in which the blood is very acrimonious, in a diſſolved and putreſcent ſtate, and contagious in a high degree. Such are the ſymptoms which ſtamp it with the character of Malignity. If, notwithſtanding theſe appearances, its putrid nature ſhall ſtill be diſputed by any one, let him attend to the ſymptoms which ſucceed thoſe we have mentioned; and which, as we ſaid before, are diſtinctly traced by Dr. Fothergill, particularly the ſwellings in the parotid and ſubmaxillary glands, and in the tonſils externally (by the ſize of all which we may judge of the quantity as well as quality of the diſeaſe) beſides the œdematous appearances of the neck and throat; with the ſame ſort of tumefaction

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on other parts of the body, as in the wriſts and fingers; the general eryſipelatous colour that comes about the ſecond day on the face, neck, breaſt, and hands, to the finger ends, which laſt are tinged in ſo remarkable a manner that the ſeeing them only is ſufficiently pathognomonic of the malady; and finally, a great number of ſmall pimples, of a colour more intenſe than that which ſurrounds them, appearing in the arms and other parts of the body.---See Dr. Fothergill's 5th edition of his Treatiſe on the Putrid Sore-throat.

The ſame writer has judiciouſly obſerved, that a wrong ſtep at the firſt may put it beyond the power of art to afford relief.

It is agreed on all hands, that the body muſt be very plethoric indeed, and in adults only, to require bleeding: I never ſaw it neceſſary even once. I believe the repetition of it to be in general deadly.

Neither do hæmorrhages from the noſe relieve the patient; they have indeed been reckoned dangerous here, as in other putrid diſtempers; and yet I have ſeen them happen very often, without proving a mortal ſymptom. In the blood, if drawn away, the craſſamentum is rather of a lax gelatinous texture, than denſe or compact, fine and rich, florid as lamb's blood, and quite ſoft.---See Doctors Fothergill and Huxham.

Emptying

Emptying the ſtomach by a gentle vomit will ſcarce ever fail to be of uſe; and there certainly appears to be a part of the putrid humours, that can only be diſcharged from the body by the ſtomach.

Where there is a looſeneſs I generally correct the humours with my Antiſeptic Wine-whey, No. II. by lemonade, tamarind tea, or imperiale. I never ſaw the looſeneſs treated in this manner do hurt, though the purging is commonly dreaded as the greateſt ſcarecrow in the Malignant Sore-throat, and therefore checked by every power of art. It did not hurt laſt ſummer in two young gentlemen, of noble families, though it went on after the ſcarlet and crimſon eruption was complete: and where it has been ſtopped by opiates and aſtringents, it has ſtill proved fatal.

We have ſeen caſes in which bliſters did not mend the matter. Heredia ſeldom found any benefit from them; and we have remarked above, that if made of cantharides they are totally againſt the genius and character of the Putrid fever. To look for any utility from the diſcharge they occaſion, in a diſeaſe where there ſcarcely exiſts any purulency, and where there is too much ſtimulus every where, appears rather to be worthy of a doating nurſe, than of a man of ſenſe and ſkill.

Dr. Fothergill has given us the hiſtory of two caſes where warm aromatic cordials and anodyne aſtringents

aſtringents were adminiſtered aſſiduouſly, with ſuitable nouriſhment, and veſicatories applied ſucceſſively to the neck, the back, and arms, but without effect.

There is not in this diſeaſe a more favourable ſymptom than a diſpoſition to ſweat, with a ſoft and moiſt ſkin: nothing ſeems to ſhorten it ſo much, to take off the delirium ſooner, or to promote ſo happily a good ſediment in the water. Our Firſt and our Seventh Formula have the beſt effects in this way. How ſeldom does Peruvian bark perform any of theſe good offices for the patient!

I never gave volatiles, except Mindererus's ſpirit, ſalt of amber, or the anodyne liquor of F. Hoffman, which are all antiſeptic; becauſe I know that volatiles only diſpoſe the juices to be more putrid, or quicken the putrid proceſs where it has already taken place too ſurely.

Where cordials are wanted, or indicated, we can be at no loſs while currant jelly, orange and lemon, or wines diluted into what is called Biſhop or Negus, or yet pure wine or old cyder, can be had. I am not acquainted with any better cordial draught than our Seventh or Eighth Formula. I never did, nor ever do expect to ſee the ſtrength ſupported, or the diſeaſe alleviated, by any poſſible preparation of animal ſubſtances. After ſweating has begun, I believe wine will never hurt, if given with moderation,

either

either diluted as above, or mixed with panada, ſago, rice and other gruels. Contraſt with this kind of practice theirs who give draughts, compoſed of God knows what, ſo often as every two or three hours day and night, for days and nights ſucceſſively, as if nature neither required other drinks, or foods, or repoſe.

If the circumſtances of the caſe require it, Peruvian bark is hurried down with the ſame haſte and ſollicitude; and bark muſt be given in our times, whether indicated or not. Where this beſt and only true febrifuge drug is neceſſary, (and it has often the happy power of triumphing over malignity in this diſeaſe, as well as in other putrid fevers, given as in our Twelfth Formula) let it in God's name be given in ſufficient quantity to put them in a ſtate of ſafety, but not perſevered in for days and nights together, without any reſpite to the poor perſecuted patient, when either the difficulty no longer exiſts, or the ſtate of the ſkin, or the increaſed dryneſs, blackneſs, and hardneſs of the tongue, ſo ſtrongly and fully point out the impropriety of perſiſting longer in its uſe; or as if it were, even in ſuch a ſituation, our laſt and ſole reſource, though in fact we have ſo many other aids from fruits, wines, and ſtrong antiſeptics both vegetable and mineral. Theſe laſt remarks are equally applicable to the Putrid Fever at large, and to the Malignant Sore-throat under conſideration.

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In this diſeaſe topical applications are very uſeful, and indeed abſolutely neceſſary: we have ſpecified above the beſt and moſt powerful. I have known the patients to expreſs their longing to have their throats touched with that reviving application (as they called it) of mel roſe and ſpirit of ſea ſalt.

It is not uncommon to ſee too little attention paid to the appearances of the throat and tonſils. I was once ſent for to a Lady of rank, who had fled to town with a quinzey as ſhe apprehended, where her apothecar had harraſſed her by two bleedings, a ſtrong purge, and a large bliſter. When I looked into her throat I diſcovered a ſmall fiſh-bone ſticking in one of her tonſils, which upon being removed left her in perfect health.

In a perſon, who had died of a diſeaſe in his throat in fourteen hours, it was ſuppoſed to be the Malignant Sore-throat; but upon diſſection there was not the leaſt appearance of diſeaſe in the tonſils, nor eryſipelatous appearance in the throat, but only a few drops of matter on the edge of the rima glottidis.

It is hoped, that what we have advanced may be ſufficient to demonſtrate the neceſſity of an antiſeptic regimen throughout, for the cure of the Ulcerated and Malignant Sore-throat in particular, no leſs than for the Putrid fever in general.

FORMULÆ

MEDICAMENTORUM.

FORMULÆ MEDICAMENTORUM.

I.

SERUM ANTISEPTICUM.

℞. Lact. vaccin. ℔iſs.
Aquæ puræ ℔ſs.

Simul ebulliant; dein admiſce ſucc. aurantiorum Sevill; limonior. ā ʒiſs. ut fiat ſerum.

II.

SERUM ANTISEPTICUM VINOSUM.

℞. Lact. vaccin. ℔iſs.
Aquæ puræ ℔ſs.

Simul ebulliant; dein admiſce vini Rhenani veteris, vel vini albi cujuſvis Hiſpanici, ʒij. ſucc. limonior. ʒi. ut fiat ſerum.

III.

POTUS ANTIPHLOGISTICUS.

℞. Hordei Gallic. ʒij.

Decoque in aquæ ℔ij. ad colaturæ ℔ij. cui admiſce mell. Anglic. ʒi. ſal. nitri purificat. ʒiſs. ut fiat potus communis.

IV.

POTUS ANTISEPTICUS APERIENS (Imperiale vulgò.)

℞. Cremor. tartar. ʒij.

Solve in aquæ puræ bullientis congio, & edulcora q. ſ. ſyrup. cortic. aurantior. Hiſpalenſium.

V.

APOZEMA ANTISEPTICUM PURGANS.

℞. Fruct. tamarind. ʒiſs.

Decoque in aquæ puræ ʒix. ad ʒvij. colaturæ; cui adhùc ſervidæ admiſce mann. opt. ʒiſs. tartar. ſolubil. ʒß. Cujus ſumat dimidium primo mane, & quod reſtat poſt bihorium.

VI.

HAUSTUS APERIENS SEDATIVUS.

℞. Tartar. ſolubil. ℈ij.
Mann. opt. ʒiſs.
Succ. limon. ʒij.
Aquæ puræ ʒiſs.

M. fiat hauſtus ſextâ quâque horâ ſumendus.

VII.

HAUSTUS DIAPHORETICUS SEDATIVUS.

℞. Spirit. Minderer.
Aquæ puræ ā ʒvi.
Liquor. anodyn. miner. Hoffman. gutt. xv.
Syrup. e mecon. ʒi.

M. fiat hauſtus bis in die ſumendus, aut 8vâ quâque horâ.*

* This draught happens to be the only preſcription I could ever contrive, which ſuited all the ſtages of Putrid Fevers, after the firſt week, as a diaphoretic and ſedative at the ſame time.

VIII.

HAUSTUS CARDIACUS DIVITUM.

℞. Vini Burgundic.
vel Burdegalenſ.
aut Rhenani veteris, ℥ij.

Sextâ quâque horâ ſumendus, aut pro re natâ.

IX.

HAUSTUS CARDIACUS ŒCONOMICUS.

℞. Vini pomacei veteris,
vel Luſitanic. rubr.
aut Hiſpanici tenuior. ℥iſs.

Horâ quâque 8vâ ſumendus, aut pro re natâ.

X.

PULVIS PROPHYLACTICUS NOSTER.

℞. Sal. polychreſt.
Pulv. radic. rhabarbar. ā gran. lx.

M. pro unâ doſi, 4 horis ante cibum aut potum ſumend. ex cyatho cujuſvis vehiculi: quando inceperit catharſis, bibat affatim Potûs Antiſeptic. Aperient. No. IV. vel liquoris Lemonade dict.

XI.

PULVIS ANTIHECTICUS ET ANTIRACHITICUS INFANTUM.

℞. Sal. polychreſt. ℈ſs.
Pulv. rad. rhabarbar. gran. iii. iv. v. vi. vel vii.

M. pro unâ doſi, omni mane ſumend. per 14 dies, vel donec ceſſerit Febris Hectica, aut Tumor Abdominis.

XII.

FEBRIFUGUM ANTISEPTICUM.

℞. Decoct. (fortior.) cortic. Peruvian. ℥ij.
Spiritûs salis marin. gutt. v.
M. fiat haustus pro re natâ sumendus & repetendus.

N. B. Had I been more ambitious of dying a rich man, than of living an useful member of society, the powers of our PROPHYLACTIC POWDER in preventing Putrid Fevers, or of nipping them in the bud, and those of the ANTIHECTIC and ANTIRACHITIC one, for curing, as if by miracle, the Hectic Fever and the Swelled Bellies of Children in this town, would have remained a secret while I lived. If it shall be said, that the materials of both have been long in use, I reply, That the first has not been given in the dose which I recommend, nor known to be fit for the purpose of prevention; and that the last has not been published before, nor its virtues understood.

FINIS.